

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, &amp; 30</i>				1. REQUISITION NUMBER See Schedule		PAGE OF 1 9	
2. CONTRACT NO. EP-W-16-015		3. AWARD/ EFFECTIVE DATE 07/09/2020		4. ORDER NUMBER 68HERH20F0333		5. SOLICITATION NUMBER	
6. SOLICITATION ISSUE DATE		7. <b>FOR SOLICITATION INFORMATION CALL:</b>		a. NAME Michael Fox		b. TELEPHONE NUMBER (No collect calls) 202-564-2550	
8. OFFER DUE DATE/LOCAL TIME ET		9. ISSUED BY CODE HQAD		10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED OR <input type="checkbox"/> SET ASIDE: % FOR:			
HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460		<input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> HUBZONE SMALL BUSINESS <input type="checkbox"/> SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS <input type="checkbox"/> WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM <input type="checkbox"/> EDWOSB <input type="checkbox"/> 8(A)		NAICS: 541620 SIZE STANDARD: \$15.0			
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input checked="" type="checkbox"/> SEE SCHEDULE		12. DISCOUNT TERMS		<input type="checkbox"/> 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		13b. RATING	
15. DELIVER TO CODE OAR/OAP/CAMD		16. ADMINISTERED BY CODE HQAD		14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input type="checkbox"/> RFP			
OAR/OAP/CAMD US Environmental Protection Agency 1200 Pennsylvania Avenue NW Mail Code: 62104J OAP/CAMD Washington DC 20460		HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460					
17a. CONTRACTOR/OFFEROR CODE 038086125		FACILITY CODE		18a. PAYMENT WILL BE MADE BY CODE RTP FMC			
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972				RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711			
TELEPHONE NO. (b)(4)							
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER				<input type="checkbox"/> 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM			
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	DUNS Number: 038086125 Title: CASTNET Base Program (4003)  This task order is issued in accordance with Task Order Ordering Procedures and hereby incorporates the base contract terms and conditions by reference. The effective date for performance to commence is July 9, 2020. The Contractor shall perform in accordance with Attachment A - Statement of Work (5 pages) and the accepted technical proposal and cost estimate dated June <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>						
25. ACCOUNTING AND APPROPRIATION DATA See schedule						26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$3,887,078.00	
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED. <input checked="" type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA <input type="checkbox"/> ARE <input checked="" type="checkbox"/> ARE NOT ATTACHED.							
<input type="checkbox"/> 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.				<input type="checkbox"/> 29. AWARD OF CONTRACT: _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:			
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)			
				 ELECTRONIC SIGNATURE			
30b. NAME AND TITLE OF SIGNER (Type or print)		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (Type or print)		31c. DATE SIGNED	
				Michael C. Fox		06/30/2020	

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	<p>1, 2020 (10 pages) in the amount of \$3,887,078.00.</p> <p>This is a Time-and-Materials (T&amp;M) task order with a total ceiling price of \$3,887,078.00 which the Contractor is not authorized to exceed. The Contractor exceeds at its own risk. The total obligated/funded ceiling amount for this order is currently \$915,170.31. This order is incrementally funded as detailed in Attachment B Summary of Amounts and Ceilings and Attachment B is hereby incorporated (1 page).</p> <p>Contracting Officer's Representative (COR) for this task order: Melissa Puchalski, (202) 343-9882, Puchalski.Melissa@epa.gov</p> <p>Alternate COR: Macy Taylor, (202) 343-9183, Macy.Taylor@epa.gov</p> <p>The services of this order are for severable. TOCOR: Melissa Puchalski Period of Performance: 07/09/2020 to 07/08/2021</p> <p>Base Operations Incrementally Funded Amount: \$915,170.31 Requisition No: PR-OAR-20-00757, PR-OAR-20-00766</p> <p>Accounting Info: Continued ...</p>				3,887,078.00

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED    ☐ INSPECTED    ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: \_\_\_\_\_

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE			32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
			32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT  <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				
38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY		
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY (Print)		
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		42b. RECEIVED AT (Location)		
		42c. DATE REC'D (YY/MM/DD)		42d. TOTAL CONTAINERS



## CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
EP-W-16-015/68HERH20F0333PAGE OF  
3 9

NAME OF OFFEROR OR CONTRACTOR

WOOD ENVIRONMENT &amp; INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	20-21-C-58D5-000A45-2505-2058DC0039-001 BFY: 20 EFY: 21 Fund: C Budget Org: 58D5 Program (PRC): 000A45 Budget (BOC): 2505 DCN - Line ID: 2058DC0039-001 Funding Flag: Partial Funded: \$800,000.00 Accounting Info: 19-20-B-58D5-000A45-2505-2058DC0039-002 BFY: 19 EFY: 20 Fund: B Budget Org: 58D5 Program (PRC): 000A45 Budget (BOC): 2505 DCN - Line ID: 2058DC0039-002 Funding Flag: Partial Funded: \$33,273.49 Accounting Info: 19-20-C-58D5-000A45-2505-2058DC0039-003 BFY: 19 EFY: 20 Fund: C Budget Org: 58D5 Program (PRC): 000A45 Budget (BOC): 2505 DCN - Line ID: 2058DC0039-003 Funding Flag: Partial Funded: \$24,305.82 Accounting Info: 20-E1-58D5-000A04-2505-2058DC0040-001 BFY: 20 Fund: E1 Budget Org: 58D5 Program (PRC): 000A04 Budget (BOC): 2505 DCN - Line ID: 2058DC0040-001 Funding Flag: Partial Funded: \$57,591.00				

**ATTACHMENT A**  
**Statement of Work**

**Title:** CASTNET Base Program  
**Contractor:** Wood E&IS, Inc.  
**Contract #:** EP-W-16-015  
**Task Order #:** 68HERH20F0333 (4003)  
**Period of Performance:** 7/9/2020 to 7/8/2021

**EPA Key Personnel**

**Task Order Project Officer (TOPO)/Contract Level Project Officer (PO):**

Melissa Puchalski  
Clean Air Markets Division (OAP/OAR/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9882  
*email:* puchalski.melissa@epa.gov

**Alternate TOPO:**

Taylor Macy  
Clean Air Markets Division (OAP/OAR/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9183  
*email:* macy.taylor@epa.gov

**Contracting Officer (CO):**

Mike Fox  
Contracting Officer  
Administrative Contract Service Center  
1200 Pennsylvania Ave N.W.  
Mail Code 3803R  
Washington DC 20460  
*phone:* (202) 564-2640  
*email:* Fox.Michael@epa.gov

## STATEMENT OF WORK

### I. INTRODUCTION

The Clean Air Status and Trends Network (CASTNET) is a long-term environmental monitoring network that measures changes in ambient air quality and assesses atmospheric deposition over broad geographic regions of the U.S. (<https://www.epa.gov/castnet>). Operating since 1987, CASTNET has evolved into a robust regional monitoring program which currently consists of approximately 95 monitoring stations nationwide. The Environmental Protection Agency (EPA) coordinates the operation of the network in cooperation with numerous federal, tribal, state and local partners.

The primary monitoring objectives of CASTNET are to:

- Provide high quality data on atmospheric deposition, rural ground level ozone and other forms of atmospheric pollution;
- Support the primary and secondary ozone NAAQS and provide data on NAAQS compliance in rural areas;
- Monitor the status and trends in regional air quality and atmospheric deposition;
- Assess and report on geographic patterns and long-term, temporal trends in ambient air pollution and atmospheric deposition;
- Improve our understanding of PM and ozone formation;
- Validate and improve atmospheric models;
- Provide data for health-based research and epidemiology studies;
- Assess the effectiveness of EPA's emission reduction programs; and
- Support science and ecosystem studies.

CASTNET sites measure weekly average concentrations of sulfate ( $\text{SO}_4^{2-}$ ), nitrate ( $\text{NO}_3^-$ ), ammonium ( $\text{NH}_4^+$ ), sulfur dioxide ( $\text{SO}_2$ ), nitric acid ( $\text{HNO}_3$ ), chloride ( $\text{Cl}^-$ ) and the base cations ( $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$  and  $\text{Ca}^{2+}$ ) using a 3-stage filter pack. In addition, each site may make ancillary measurements, including hourly ozone ( $\text{O}_3$ ), hourly meteorology, ammonia ( $\text{NH}_3$ ) gas using passive devices, and trace-level gases. Trace-level gas monitors include reactive oxidized nitrogen ( $\text{NO}_y$ ), nitric oxide ( $\text{NO}$ ), sulfur dioxide ( $\text{SO}_2$ ) and carbon monoxide ( $\text{CO}$ ). CASTNET  $\text{O}_3$ , meteorological, and trace gas measurements follow the requirements in the Code of Federal Regulations (CFR) and EPA's Quality Assurance Handbook.

### II. PURPOSE

The primary purpose of this task order is to provide for routine activities and provisions associated with operating the CASTNET base program. All tasks shall be performed in accordance with the contract's Statement of Work.

Tasks performed under this task order will cover the operation of all sites, excluding those Tribal sites covered under Task Order 4004.

### III. CONTRACT LEVEL STATEMENT OF WORK REFERENCE

The tasks to be performed under this task order are consistent with the activities authorized in CLINs 1 through 21 of the contract's Statement of Work.

## IV. TECHNICAL DIRECTION

### 1. Prepare a Technical Proposal and Cost Estimate

The Contractor shall prepare a Task Order Technical Proposal and Cost Estimate (TP&CE) in accordance with the terms and conditions of contract clauses B.1 entitled Fixed Rates for Services – Indefinite delivery/Indefinite quantity and submit to EPA. The TP&CE shall be delivered within 10 days after the issuance of the task order SOW.

Quality assurance reviews and management performance reviews shall be executed to ensure the requirements are being met in the contractor's SOW and technical proposal including reviews of financial management activities, deliverables and technical services.

### 2. Base Operations

The contractor shall perform the tasks and subtasks listed in the SOW for Task Order 4003 as delineated in the CASTNET V contract SOW and the contractor's technical proposal. Descriptions of the technical approach and methods are found in the CASTNET Quality Assurance Project Plan (QAPP) v 9.3 and the technical proposal. The number of applicable sites, units and estimated hours for the CLINs, as described in the contract's SOW, that shall be delivered are as follows:

CLIN	DESCRIPTION	SITES	UNITS	HOURS
1	Core Operations	1	12	14,890
2	Dry Dep Filterpack w/ operator	49	588	3,416
3	Dry Dep Filterpack w/o operator	8	96	558
4	Ozone Monitoring w/ operator	48	576	3,364
5	Ozone Monitoring w/o operator	3	36	210
6	Meteorology w/ operator	2	24	12
8	Trace Gas NOy w/ operator	4	48	74
9	Trace Gas NOy w/o operator	2	24	37
10	Trace Gas SO2 w/ operator	1	12	8
12	Trace Gas CO w/ operator	1	12	5
14	Filter Media Analysis	57	3,369	-
15	Artificial precipitation audit sample	1	15	-
16	Operation of an NADP AMoN site co-located w/ CASTNET	31	372	56
17	Operation of an NADP NTN site co-located w/ CASTNET	17	204	20
18	Operation of an NADP NTN site not co-located w/ CASTNET	6	72	7
19	Operation of IMPROVE sampler co-located with CASTNET	2	24	2
20	Acquisition and Management of NPS, BLM-WSO Data	35	420	97
<b>TOTAL HOURS</b>				<b>22,757</b>

Attachment 1 describes which CLINs shall be performed at each site. The table above is a summary of Attachment 1. The table above shows SITE/YEAR as the number of CLINs ordered for that site per *12-months*. The UNIT is the number of site-months ordered for each CLIN.

## V. DELIVERABLES AND SCHEDULE

### 1. Proposal

The contractor shall deliver a Task Order Technical and Cost Proposal in accordance with clause B.7 Task Order Ordering Procedures of the contract. The proposal shall be submitted 10 days after receipt of the SOW.

## **2. Monthly Progress Report**

The contractor shall prepare and submit a monthly progress report by the 15<sup>th</sup> of each month summarizing the progress made, issues encountered or expected, work planned for the next reporting period and costs. These reports shall comply with contract clauses F.5 Reports of Work and F.1 Monthly Progress Report. Reports shall be delivered electronically.

## **3. Additional Deliverables**

The contractor shall deliver the following reports electronically, as described in the contract SOW:

Daily Data Submittal	24 hours from collection of data
Monthly Data Submittal	At the end of each month
Quarterly Data Submittal	120 days after each quarter
Quarterly Data Report	90 days after each quarter
Annual Report	Draft October 1, 2020
QA Quarterly Report	30 days after completion of quarters 1, 2, 3
QA Annual Report	30 days after completion of quarter 4
QAPP	Reviewed annually and updated as needed, draft submitted by November 1, 2020

### **Distribution of Deliverables:**

Addressee	Copies
EPA Contracting Officer (Mike Fox)	1
EPA Project Officer (Melissa Puchalski)	1
EPA Alternate (Taylor Macy)	1



Attachment 1. Matrix of CLINs by CASTNET Site ID – see Table in “clin\_matrix\_option4.csv”

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	-	\$915,170.31	\$915,170.31
<b>Total</b>	-	<b>\$915,170.31</b>	<b>\$915,170.31</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$3,887,078.00
<b>Total</b>	-	-	<b>\$3,887,078.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1      2	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00001		See Block 16C		PR-OAR-20-01279		4003	
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
HQAD							
US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972							
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-W-16-015			
				68HERH20F0333			
				10B. DATED (SEE ITEM 13)			
				06/30/2020			
CODE 038086125		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$300,000.00	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) EPA-B-32-103 - LIMITATION OF GOVERNMENT'S OBLIGATION						
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 038086125							
The purpose of this modification is to obligate incremental funding in the amount of \$300,000.00 to this task order.							
TOCOR: Melissa Puchalski							
LIST OF CHANGES:							
Reason for Modification: Funding Only Action							
Obligated Amount for this Modification: \$300,000.00							
New Total Obligated Amount for this Award: \$1,215,170.31							
Incremental Funded Amount changed: from							
\$915,170.31 to \$1,215,170.31							
CHANGES FOR LINE ITEM NUMBER: 1							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Michael C. Fox			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
				ELECTRONIC SIGNATURE 		08/13/2020	
(Signature of person authorized to sign)				(Signature of Contracting Officer)			

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-W-16-015/68HERH20F0333/P00001	2	2

NAME OF OFFEROR OR CONTRACTOR

WOOD ENVIRONMENT &amp; INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Obligated Amount for this Modification: \$300,000.00 Incremental Funded Amount changed from \$915,170.31 to \$1,215,170.31</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 20-21-C-58D5-000A45-2505-2058DC0070-001 Beginning FiscalYear 20 Ending Fiscal Year 21 Fund (Appropriation) C Budget Organization 58D5 Program (PRC) 000A45 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2058DC0070-001 Amount: \$300,000.00 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Period of Performance: 07/09/2020 to 07/08/2021</p>				

EP-W-16-015  
Order#: 68HERH20F0333 (4003)  
Modification#: P00001

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	\$915,170.31	\$300,000.00	\$1,215,170.31
<b>Total</b>	<b>\$915,170.31</b>	<b>\$300,000.00</b>	<b>\$1,215,170.31</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$3,887,078.00
<b>Total</b>	<b>-</b>	<b>-</b>	<b>\$3,887,078.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).



<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE		PAGE OF PAGES	
				1 2	
2. AMENDMENT/MODIFICATION NO. P000002		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. PR-OAR-20-01475	
5. PROJECT NO. (If applicable) 4003		6. ISSUED BY HQAD		7. ADMINISTERED BY (If other than Item 6) CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972		(x)		9A. AMENDMENT OF SOLICITATION NO.	
CODE 038086125		FACILITY CODE		9B. DATED (SEE ITEM 11)	
		x		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-W-16-015 68HERH20F0333	
				10B. DATED (SEE ITEM 13) 06/30/2020	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.  
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)  
See Schedule Net Increase: \$14,074.00

**13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) EPA-B-32-103 - LIMITATION OF GOVERNMENT'S OBLIGATION

**E. IMPORTANT:** Contractor ☒ is not ☐ is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  
DUNS Number: 038086125  
The purpose of this modification is to obligate incremental funding in the amount of \$14,074.00 to this task order.

LIST OF CHANGES:  
Reason for Modification: Funding Only Action  
Obligated Amount for this Modification: \$14,074.00  
New Total Obligated Amount for this Award: \$1,229,244.31  
Incremental Funded Amount changed: from \$1,215,170.31 to \$1,229,244.31  
Funding Period changed to : 01/2021  
Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Michael C. Fox	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 10/02/2020

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-W-16-015/68HERH20F0333/P00002	2	2

NAME OF OFFEROR OR CONTRACTOR

WOOD ENVIRONMENT &amp; INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>CHANGES FOR LINE ITEM NUMBER: 1</p> <p>Obligated Amount for this Modification: \$14,074.00</p> <p>Incremental Funded Amount changed from \$1,215,170.31 to \$1,229,244.31</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code:</p> <p>20-21-BR-58D5X03-000A45-2505-2058DC0081-001</p> <p>Beginning FiscalYear 20</p> <p>Ending Fiscal Year 21</p> <p>Fund (Appropriation) BR</p> <p>Budget Organization 58D5X03</p> <p>Program (PRC) 000A45</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 2058DC0081-001</p> <p>Amount: \$14,074.00</p> <p>Subject To Funding: N</p> <p>Payment Address:</p> <p>RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p>www2.epa.gov/financial/contracts</p> <p>Durham NC 27711</p> <p>Payment:</p> <p>RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p>www2.epa.gov/financial/contracts</p> <p>Durham NC 27711</p> <p>Period of Performance: 07/09/2020 to 07/08/2021</p>				

EP-W-16-015  
Order#: 68HERH20F0333 (4003)  
Modification#: P00002

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	\$1,215,170.31	\$14,074.00	\$1,229,244.31
<b>Total</b>	<b>\$1,215,170.31</b>	<b>\$14,074.00</b>	<b>\$1,229,244.31</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$3,887,078.00
<b>Total</b>	<b>-</b>	<b>-</b>	<b>\$3,887,078.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, &amp; 30</i>				1. REQUISITION NUMBER See Schedule		PAGE OF 1 8	
2. CONTRACT NO. EP-W-16-015		3. AWARD/ EFFECTIVE DATE 07/09/2020		4. ORDER NUMBER 68HERH20F0334		5. SOLICITATION NUMBER	
6. SOLICITATION ISSUE DATE							
7. <b>FOR SOLICITATION INFORMATION CALL:</b>		a. NAME Michael Fox			b. TELEPHONE NUMBER (No collect calls) 202-564-2550		8. OFFER DUE DATE/LOCAL TIME ET
9. ISSUED BY HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460				10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED OR <input type="checkbox"/> SET ASIDE: % FOR:  <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> SMALL BUSINESS  <input type="checkbox"/> HUBZONE SMALL BUSINESS  <input type="checkbox"/> SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS </div> <div> <input type="checkbox"/> WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM  <input type="checkbox"/> EDWOSB  <input type="checkbox"/> 8(A) </div> <div> NAICS: 541620   SIZE STANDARD: \$15.0 </div> </div>			
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE		12. DISCOUNT TERMS		13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		13b. RATING	
15. DELIVER TO OAR/OAP US Environmental Protection Agency 1200 Pennsylvania Avenue NW Mail Code: 62101J OAR/OAP Washington DC 20460		16. ADMINISTERED BY HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460		14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input type="checkbox"/> RFP			
17a. CONTRACTOR/OFFEROR CODE 038086125		FACILITY CODE		18a. PAYMENT WILL BE MADE BY RTP FMC			
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972  (b)(4) TELEPHONE NO.				RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711			
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER				<input type="checkbox"/> 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM			
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	DUNS Number: 038086125 Title: Tribal Base Operation of Network (4004)  This task order is issued in accordance with Task Order Ordering Procedures and hereby incorporates the base contract terms and conditions by reference. The effective date for performance to commence is July 9, 2020. The Contractor shall perform in accordance with Attachment A - Statement of Work (4 pages) and the accepted technical proposal and cost estimate dated May <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>						
25. ACCOUNTING AND APPROPRIATION DATA See schedule						26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$191,714.00	
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA <input checked="" type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA						<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED. <input type="checkbox"/> ARE <input checked="" type="checkbox"/> ARE NOT ATTACHED.	
<input type="checkbox"/> 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.				<input type="checkbox"/> 29. AWARD OF CONTRACT: _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:			
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)  <div style="text-align: right;">ELECTRONIC SIGNATURE</div>			
30b. NAME AND TITLE OF SIGNER (Type or print)		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (Type or print) Michael C. Fox		31c. DATE SIGNED 06/30/2020	

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	<p>29, 2020 (6 pages) in the amount of \$191,714.00.</p> <p>This is a Time-and-Materials (T&amp;M) task order with a total ceiling price of \$191,714.00 which the Contractor is not authorized to exceed. The Contractor exceeds at its own risk. The total obligated/funded ceiling amount for this order is currently \$88,801.88. This order is incrementally funded as detailed in Attachment B Summary of Amounts and Ceilings and Attachment B is hereby incorporated (1 page).</p> <p>Contracting Officer's Representative (COR) for this task order: Melissa Puchalski, (202) 343-9882, Puchalski.Melissa@epa.gov</p> <p>Alternate COR: Macy Taylor, (202) 343-9183, Macy.Taylor@epa.gov</p> <p>The services of this order are for severable. TOCOR: Melissa Puchalski Period of Performance: 07/09/2020 to 07/08/2021</p> <p>Tribal Base Operations Requisition No: PR-OAR-20-00779, PR-OAR-20-00970</p> <p>Accounting Info: 19-20-C-58D5-000A45-2505-2058DC0042-001 BFY: 19 Continued ...</p>				

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED    ☐ INSPECTED    ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: \_\_\_\_\_

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE			32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
			32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT  <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				
38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY		
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY ( <i>Print</i> )		
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		42b. RECEIVED AT ( <i>Location</i> )		
		42c. DATE REC'D (YY/MM/DD)		42d. TOTAL CONTAINERS



NAME OF OFFEROR OR CONTRACTOR  
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	EFY: 20 Fund: C Budget Org: 58D5 Program (PRC): 000A45 Budget (BOC): 2505 DCN - Line ID: 2058DC0042-001 Funding Flag: Partial Funded: \$40,883.88 Accounting Info: 20-E1-58D5-000A17-2505-2058DC0056-001 BFY: 20 Fund: E1 Budget Org: 58D5 Program (PRC): 000A17 Budget (BOC): 2505 DCN - Line ID: 2058DC0056-001 Funding Flag: Partial Funded: \$47,918.00				

**ATTACHMENT A**  
**Statement of Work**

<b>Title:</b>	Tribal Base Operation of the Network (4004)
<b>Contractor:</b>	Wood E&IS, Inc.
<b>Contract #:</b>	EP-W-16-015
<b>Task Order #:</b>	68HERH20F0334
<b>Period of Performance:</b>	7/9/2020 to 7/8/2021

**EPA Key Personnel**

**Task Order Project Officer (TOPO)/Contract Level Project Officer (PO):**

Melissa Puchalski  
Clean Air Markets Division (OAP/OAR/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9882  
*email:* puchalski.melissa@epa.gov

**Alternate TOPO:**

Taylor Macy  
Clean Air Markets Division (OAP/OAR/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9183  
*email:* macy.taylor@epa.gov

**Contracting Officer (CO):**

Mike Fox  
Contracting Officer  
Administrative Contract Service Center  
1200 Pennsylvania Ave N.W.  
Mail Code 3803R  
Washington DC 20460  
*phone:* (202) 564-2550  
*email:* fox.michael@epa.gov

## STATEMENT OF WORK

### I. INTRODUCTION

The Clean Air Status and Trends Network (CASTNET) is a long-term environmental monitoring network that measures changes in ambient air quality and assesses atmospheric deposition over broad geographic regions of the U.S. (<https://www.epa.gov/castnet>). Operating since 1987, CASTNET has evolved into a robust regional monitoring program which currently consists of approximately 95 monitoring stations nationwide. The Environmental Protection Agency (EPA) coordinates the operation of the network in cooperation with numerous federal, tribal, state and local partners.

The primary monitoring objectives of CASTNET are to:

- Provide high quality data on atmospheric deposition, rural ground level ozone and other forms of atmospheric pollution;
- Support the primary and secondary ozone NAAQS and provide data on NAAQS compliance in rural areas;
- Monitor the status and trends in regional air quality and atmospheric deposition;
- Assess and report on geographic patterns and long-term, temporal trends in ambient air pollution and atmospheric deposition;
- Improve our understanding of PM and ozone formation;
- Validate and improve atmospheric models;
- Provide data for health-based research and epidemiology studies;
- Assess the effectiveness of EPA's emission reduction programs; and
- Support science and ecosystem studies.

CASTNET sites measure weekly average concentrations of sulfate ( $\text{SO}_4^{2-}$ ), nitrate ( $\text{NO}_3^-$ ), ammonium ( $\text{NH}_4^+$ ), sulfur dioxide ( $\text{SO}_2$ ), nitric acid ( $\text{HNO}_3$ ), chloride ( $\text{Cl}^-$ ) and the base cations ( $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$  and  $\text{Ca}^{2+}$ ) using a 3-stage filter pack. In addition, each site may make ancillary measurements, including hourly ozone ( $\text{O}_3$ ), hourly meteorology, ammonia ( $\text{NH}_3$ ) gas using passive devices, and trace-level gases. Trace-level gas monitors include reactive oxidized nitrogen ( $\text{NO}_y$ ), nitric oxide ( $\text{NO}$ ), sulfur dioxide ( $\text{SO}_2$ ) and carbon monoxide ( $\text{CO}$ ). CASTNET  $\text{O}_3$ , meteorological, and trace gas measurements follow the requirements in the Code of Federal Regulations (CFR) and EPA's Quality Assurance Handbook.

### II. PURPOSE

The primary purpose of this task order is to provide for routine activities and provisions associated with operating the CASTNET base program at Tribal monitoring sites. All tasks shall be performed in accordance with the contract's Statement of Work.

Tasks performed under this task order will cover the operation of all CASTNET tribal monitoring sites, excluding all sites covered under Task Order 4003. See Table 1 for a list of tribal sites covered under this task order.

*Table 1 Task Order 4004 Tribal Sites*

Site ID	State	Tribal Affiliation
ALC188	Texas	Alabama-Coushatta Tribe of Texas

CHE185	Oklahoma	Cherokee Nation
KIC003	Kansas	Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
NPT006	Idaho	Nez Perce Tribe
RED004	Minnesota	Red Lake Band of Chippewa Indians
SAN189	Nebraska	Santee Sioux Nation
UMA009	Washington	Confederated Tribes of the Umatilla Indian Reservation

### III. CONTRACT LEVEL STATEMENT OF WORK REFERENCE

The tasks to be performed under this task order are consistent with the activities authorized in Tasks 2 through 5, 7, 14 and 16 from the contract's Statement of Work.

### IV. TECHNICAL DIRECTION

#### 1. Prepare a Technical Proposal and Cost Estimate

The Contractor shall prepare a Task Order Technical Proposal and Cost Estimate (TP&CE) in accordance with the terms and conditions of contract clauses B.1 entitled Fixed Rates for Services – Indefinite delivery/Indefinite quantity and submit to EPA. The TP&CE shall be delivered within 10 days after the issuance of the task order SOW.

Quality assurance reviews and management performance reviews shall be executed to ensure the requirements are being met in the contractor's SOW and technical proposal including reviews of financial management activities, deliverables and technical services.

#### 2. Base Operations

The contractor shall perform the tasks and subtasks listed in the SOW for Task Order 4004 as delineated in the CASTNET V contract SOW and the contractor's technical proposal. Descriptions of the technical approach and methods are found in the CASTNET Quality Assurance Project Plan (QAPP) v 9.3 and the technical proposal. The number of applicable sites, units and estimated hours for the Tasks, as described in the contract's SOW, that shall be delivered are as follows:

*Table 2 Task Order 4004 Task Summary*

Task	DESCRIPTION	SITES	UNITS	HOURS
<b>2</b>	Dry deposition filter pack operation with site operator	1	12	70
<b>3</b>	Dry deposition filter pack operation without site operator	6	72	418
<b>4</b>	Ozone monitoring (40 CFR Part 58 protocol) with site operator	1	12	70
<b>5</b>	Ozone monitoring (40 CFR Part 58 protocol) without site operator	3	36	210
<b>7</b>	Meteorology measurements without site operator	1	12	6
<b>14</b>	Filter media analysis (including preparation, field samples, and laboratory blanks)	7	414	0
<b>16</b>	Operation of an NADP AMoN site co-located with CASTNET filter pack sampling	1	12	2

Attachment 1 describes which tasks and CLINs shall be performed at each site. The table above is a summary of Attachment 1. The table above shows SITE/YEAR as the number of CLINs ordered for that site per 12-months. The UNIT is the number of site-months ordered for each CLIN.

## V. DELIVERABLES AND SCHEDULE

### 1. Proposal

The contractor shall deliver a Task Order Technical and Cost Proposal in accordance with clause B.7 Task Order Ordering Procedures of the contract. The proposal shall be submitted 10 days after receipt of the SOW.

### 2. Monthly Progress Report

The contractor shall prepare and submit a monthly progress report by the 15<sup>th</sup> of each month summarizing the progress made, issues encountered or expected, work planned for the next reporting period and costs. These reports shall comply with contract clauses F.5 Reports of Work and F.1 Monthly Progress Report. Reports shall be delivered electronically.

### 3. Additional Deliverables

The contractor shall deliver the following reports electronically (as required under Task Order 4003) and will include data from the Tribal monitoring sites under this Task Order. Duplicate reports shall not be submitted.

#### Distribution of Deliverables:

Addressee	Copies
EPA Contracting Officer (Mike Fox)	1
EPA Project Officer (Melissa Puchalski)	1
EPA Alternate (Taylor Macy)	1

Attachment 1. Matrix of CLINs by CASTNET Site ID

SITE_ID	CLINs						
	2	3	4	5	7	14	16
ALC188	12		12			59.11	12
CHE185		12			12	59.11	
KIC003		12				59.11	
NPT006		12		12		59.11	
RED004		12				59.11	
SAN189		12		12		59.11	
UMA009		12		12		59.11	
total	12	72	12	36	12	414	12
counts	1	6	1	3	1	7	1



**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	-	\$88,801.88	\$88,801.88
<b>Total</b>	-	<b>\$88,801.88</b>	<b>\$88,801.88</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$191,714.00
<b>Total</b>	-	-	<b>\$191,714.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, &amp; 30</i>				1. REQUISITION NUMBER PR-OAR-20-01013		PAGE OF 1 9			
2. CONTRACT NO. EP-W-16-015			3. AWARD/ EFFECTIVE DATE		4. ORDER NUMBER 68HERH20F0336		5. SOLICITATION NUMBER		
7. <b>FOR SOLICITATION INFORMATION CALL:</b>			a. NAME Michael Fox			b. TELEPHONE NUMBER (No collect calls) 202-564-2550		8. OFFER DUE DATE/LOCAL TIME ET	
9. ISSUED BY HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460				10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED OR <input type="checkbox"/> SET ASIDE: % FOR: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> SMALL BUSINESS  <input type="checkbox"/> HUBZONE SMALL BUSINESS  <input type="checkbox"/> SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS </div> <div> <input type="checkbox"/> WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM  <input type="checkbox"/> EDWOSB  <input type="checkbox"/> 8(A) </div> <div> NAICS: 541620   SIZE STANDARD: \$15.0 </div> </div>					
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input checked="" type="checkbox"/> SEE SCHEDULE		12. DISCOUNT TERMS		13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) <input type="checkbox"/>		13b. RATING			
15. DELIVER TO OAR/OAP US Environmental Protection Agency 1200 Pennsylvania Avenue NW Mail Code: 62101J OAR/OAP Washington DC 20460				16. ADMINISTERED BY HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460					
17a. CONTRACTOR/OFFEROR CODE 038086125		FACILITY CODE		18a. PAYMENT WILL BE MADE BY RTP FMC					
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972  <div style="border: 1px solid black; width: 150px; height: 30px; margin: 5px auto; text-align: center;">(b)(4)</div>				RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711					
TELEPHONE NO.				17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER <input type="checkbox"/>					
18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM									
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT		
	DUNS Number: 038086125 Title: Non-routine Maintenance and Repairs of CASTNET Equipment (4006)  This task order is issued in accordance with Task Order Ordering Procedures and hereby incorporates the base contract terms and conditions by reference. The effective date for performance to commence is July 9, 2020. The Contractor shall perform in accordance with Attachment A - Statement of Work (5 pages) and the accepted <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>								
25. ACCOUNTING AND APPROPRIATION DATA See Schedule						26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$189,837.00			
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA <input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA						<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED. <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.			
<input type="checkbox"/> 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.					<input type="checkbox"/> 29. AWARD OF CONTRACT: _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:				
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)  <div style="text-align: center;">   ELECTRONIC SIGNATURE </div>					
30b. NAME AND TITLE OF SIGNER (Type or print)		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (Type or print) Michael C. Fox		31c. DATE SIGNED 07/01/2020			

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	<p>technical proposal and cost estimate dated June 30, 2020 (10 pages) in the amount of \$189,837.00.</p> <p>This is a Time-and-Materials (T&amp;M) task order with a total ceiling price of \$189,837.00, which the Contractor is not authorized to exceed. The Contractor exceeds at its own risk. The total obligated/funded ceiling amount for this order is currently \$41,000.00. This order is incrementally funded as detailed in Attachment B Summary of Amounts and Ceilings and Attachment B is hereby incorporated (1 page).</p> <p>Contracting Officer's Representative (COR) for this task order: Taylor Macy (202) 343-9183, Macy.Taylor@epa.gov</p> <p>Alternate COR: Greg Beachley (202) 343-9621, Beachley.Gregory@epa.gov</p> <p>The services of this order are for severable. TOCOR: Taylor Macy Period of Performance: 07/09/2020 to 07/08/2021</p> <p>Non-Routine Maintenance and Repairs of CASTNET Equipment Incrementally Funded Amount: \$41,000.00</p> <p>Continued ...</p>				189,837.00

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED    ☐ INSPECTED    ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: \_\_\_\_\_

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE			32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
			32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT  <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				
38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY		
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY ( <i>Print</i> )		
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		42b. RECEIVED AT ( <i>Location</i> )		
		42c. DATE REC'D (YY/MM/DD)		42d. TOTAL CONTAINERS

NAME OF OFFEROR OR CONTRACTOR  
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Accounting Info: 20-E1-58D5-000A17-2505-2058DC0060-001 BFY: 20 Fund: E1 Budget Org: 58D5 Program (PRC): 000A17 Budget (BOC): 2505 DCN - Line ID: 2058DC0060-001 Funding Flag: Complete Funded: \$41,000.00				

**ATTACHMENT A**  
**Statement of Work**

<b>Title:</b>	Non-routine Maintenance and Repairs of CASTNET Equipment (4006)
<b>Contractor:</b>	Wood E&IS, Inc.
<b>Contract #:</b>	EP-W-16-015
<b>Task Order #:</b>	68HERH20F0336
<b>Period of Performance:</b>	7/9/2020 – 7/8/2021

**EPA Key Personnel**

**Task Order Project Officer (TOPO):**

Taylor Macy  
 Clean Air Markets Division (OAR/OAP/CAMD)  
 1200 Pennsylvania Ave., NW  
 Mail Code 6204M  
 Washington, DC 20460  
*phone:* (202) 343-9183  
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**Alternate TOPO:**

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**Contracting Officer (CO):**

Michael Fox  
 Contracting Officer  
 Administrative Contract Service Center  
 1200 Pennsylvania Ave N.W.  
 Mail Code 3803R  
 Washington DC 20460  
*phone:* (202) 564-2550  
*email:* fox.michael@epa.gov

## **STATEMENT OF WORK**

### **I. INTRODUCTION**

The Clean Air Status and Trends Network (CASTNET) is a long-term environmental monitoring network that measures changes in ambient air quality and assesses atmospheric deposition over broad geographic regions of the U.S. (<https://www.epa.gov/castnet>). Operating since 1987, CASTNET has evolved into a robust regional monitoring program which currently consists of more than 95 monitoring stations nationwide. The Environmental Protection Agency (EPA) coordinates the operation of the network in cooperation with numerous federal, tribal, state and local partners.

The primary monitoring objectives of CASTNET are to:

- Provide high quality data on atmospheric deposition, rural ground-level ozone and other forms of atmospheric pollution;
- Support the primary and secondary ozone NAAQS and provide data on NAAQS compliance in rural areas;
- Monitor the status and trends in regional air quality and atmospheric deposition;
- Assess and report on geographic patterns and long-term, temporal trends in ambient air pollution and atmospheric deposition;
- Improve our understanding of PM and ozone formation;
- Validate and improve atmospheric models;
- Provide data for health-based research and epidemiology studies;
- Assess the effectiveness of EPA's emission reduction programs; and
- Support science and ecosystem studies.

CASTNET sites measure weekly average concentrations of sulfate ( $\text{SO}_4^{2-}$ ), nitrate ( $\text{NO}_3^-$ ), ammonium ( $\text{NH}_4^+$ ), sulfur dioxide ( $\text{SO}_2$ ), nitric acid ( $\text{HNO}_3$ ), chloride ( $\text{Cl}^-$ ) and the base cations ( $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$  and  $\text{Ca}^{2+}$ ) using a 3-stage filter pack. In addition, each site may make ancillary measurements, including hourly ozone ( $\text{O}_3$ ), hourly meteorology, ammonia ( $\text{NH}_3$ ) gas using passive devices, and trace-level gases. Trace-level gas monitors include reactive oxidized nitrogen ( $\text{NO}_y$ ), nitric oxide ( $\text{NO}$ ), sulfur dioxide ( $\text{SO}_2$ ) and carbon monoxide ( $\text{CO}$ ). CASTNET  $\text{O}_3$ , meteorological, and trace gas measurements follow the requirements in the Code of Federal Regulations (CFR) and EPA's Quality Assurance Handbook.

### **II. PURPOSE**

The primary purpose of this task order is to perform non-routine maintenance on CASTNET equipment and infrastructure repairs due to unforeseen circumstances, including errors or faulty parts/equipment on the part of manufacturers, or the discontinuation of measurements at current monitoring sites. This work should be considered out of scope from the base operations task orders in place for Task Orders 4003 and 4004 (CASTNET Base Program and CASTNET Tribal

Base Program, respectively), which cover routine, expected maintenance. The TOPO may provide technical direction for performing specific tasks under this task order.

### **III. CONTRACT LEVEL STATEMENT OF WORK REFERENCE**

The tasks to be performed under this task order are consistent with the activities authorized in Task 22 (Level of Effort) from the contract's Statement of Work.

### **IV. TECHNICAL DIRECTION**

#### **1. Prepare a Task Order Technical Proposal & Cost Estimate**

The Contractor shall prepare a Task Order Proposal and Cost Estimate (TP&CE) in accordance with the terms and conditions of contract clauses B.1 entitled Fixed Rates for Services – Indefinite delivery/Indefinite Quantity, using time and materials with a cost ceiling, and will submit it to EPA 10 days after receipt of this SOW.

#### **2. Perform Non-Routine Maintenance and Repairs**

##### **2.1 Repair of CASTNET shelters**

The site shelter enclosures themselves are an important aspect of CASTNET in that they allow proper operating conditions to be maintained in order for CASTNET monitoring to meet the rigorous QA standards required for regulatory NAAQS measurements. Most of the shelters in the network have been in place for upwards of 20 years or longer. They are subject to normal wear and tear and are exposed to harsh weather conditions that can cause significant damage over time. Cost analyses show that repair of these shelters is much more cost-effective than a replacement. The contractor shall monitor shelters for repair needs and arrange and conduct the repairs when needed. The repairs may range from minor maintenance to major repairs such as roof or floor replacements. Repairs shall be made in a way to minimize their impact on the sampling schedule.

##### **2.2 Re-wiring of Backplanes**

The wiring for the backplanes were standardized at all but 3 EPA-sponsored CASTNET sites under the previous task order (3006). Under this task order the contractor shall update the backplanes at the Beltsville, MD (BEL116), Pinedale, WY (PND165) and Bondville, IL (BVL130) sites so wiring associated with the communication system can be standardized. The contractor shall install the new backplanes during regularly scheduled calibration visits.

##### **2.3 Additional Maintenance, Repairs and Equipment Purchases**

Additional technical direction will be given as other non-routine maintenance and repairs arise on CASTNET equipment and infrastructure. This task includes, but is not limited to aging ozone analyzers, flow controllers and data loggers.

##### **2.4 Install a Small-Footprint/Ozone Site for the Confederated Tribes of Umatilla Indian Reservation (CTUIR) (UMA009)**

The CTUIR has agreed to host and operate a small-footprint filter pack site with an ozone monitoring system located in Davis, WA. All equipment was procured under the previous option period. Under this task order the contractor shall ship all of the equipment to the site prior to installation. The contractor shall install the CASTNET monitoring site in the chosen location. The contractor shall work with the tribe to establish an installation date and the tribe should be available for training from the Contractor during or following the installation. Prior to leaving the site, the contractor shall calibrate the flow systems and ozone analyzer and verify that all equipment and instruments are operating within the established criteria. The contractor shall provide all SOPs and other documentation on site (electronically or hard copy).

### **2.5 Decommissioning and Moving Equipment at Nick's Lake (NIC001, NY)**

If instructed by the project officer, the contractor shall decommission the NIC001 CASTNET site and move the site to the airport located in Piseco Lake, NY. The contractor shall move all equipment required for the site. All equipment and supplies shall be inspected and tested by the contractor before reinstallation. As part of the site move, the contractor shall calibrate the flow systems and verify that all equipment and instruments are operating within the established criteria. The decommission and move will only be performed if there is technical direction to do so.

### **2.6 Decommissioning and Moving CASTNET and NADP Equipment at Horton Station (VPI120/VA13)**

The parcel of land where the VPI120/VA13 CASTNET and NADP sites are located has been sold. The new landowner has requested that the equipment and shelter be removed from the property by July 31<sup>st</sup>. Once a new site location has been identified, the contractor shall prepare the new site location with footers for the shelter, a concrete base for the 10m tower, a base for the precipitation collector and rain gage and a power drop. The contractor shall perform a final calibration on all of the CASTNET equipment prior to decommissioning the site and removing shelter. Once the equipment is removed the contractor shall perform any maintenance required to return the area back to its natural state.

The contractor shall install the shelter and all CASTNET and NADP equipment at the new location. The contractor shall recalibrate all of the CASTNET equipment prior to leaving the site. If the new site is more than 10km away, a new NADP and CASTNET site id will be established. The contractor will be responsible for re-establishing an internet connection for CASTNET and NADP for remote access. The contractor shall establish a land lease with the new landowner (if required) stating they will allow access to the site operator(s) and auditors.

## **V. DELIVERABLES**

All deliverables shall be reviewed and quality assured during the performance of this task order. Deliverables should be submitted to EPA electronically.



### **1. Technical Proposal & Cost Estimate**

The contractor shall deliver a Task Order Technical Proposal and Cost Estimate in accordance with clause Attachment 12 Task Order Ordering Procedures of the contract (EP-W-16-015). The proposal shall be submitted 10 days after receipt of the SOW.

### **2. Monthly Progress Report**

The contractor shall prepare and submit a monthly progress report by the 15<sup>th</sup> of each month summarizing the progress made, issues encountered or expected, work planned for the next reporting period and costs. These reports shall comply with contract clauses F.1 Monthly Progress Report and F.5 Reports of Work.

Additional deliverables may be required as part of future technical direction.

## **VI. SCHEDULE**

The task order proposal shall be delivered within 10 days of issuance of this task order.

### **Distribution of Deliverables:**

Addressee	Copies
EPA Contracting Officer (Mike Fox)	1
EPA Project Officer (Melissa Puchalski)	1
EPA Task Order Project Officer (Taylor Macy)	1
EPA Alternate TOPO (Gregory Beachley)	1

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	-	\$41,000.00	\$41,000.00
<b>Total</b>	-	<b>\$41,000.00</b>	<b>\$41,000.00</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$189,837.00
<b>Total</b>	-	-	<b>\$189,837.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1      2	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00001		See Block 16C		PR-OAR-20-01281		4006	
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
HQAD							
HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972							
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-W-16-015			
				68HERH20F0336			
				10B. DATED (SEE ITEM 13)			
				07/01/2020			
CODE 038086125		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$85,000.00	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) EPA-B-32-103 - LIMITATION OF GOVERNMENTS OBLIGATION						
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 038086125							
The purpose of this modification is to obligate incremental funding in the amount of \$85,000.00 to this task order.							
TOCOR: Taylor Macy							
LIST OF CHANGES:							
Reason for Modification: Funding Only Action							
Obligated Amount for this Modification: \$85,000.00							
New Total Obligated Amount for this Award: \$126,000.00							
Incremental Funded Amount changed: from							
\$41,000.00 to \$126,000.00							
CHANGES FOR LINE ITEM NUMBER: 1							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Michael C. Fox			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
				 (Signature of Contracting Officer)		ELECTRONIC SIGNATURE 08/13/2020	
(Signature of person authorized to sign)							

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-W-16-015/68HERH20F0336/P00001	2	2

NAME OF OFFEROR OR CONTRACTOR

WOOD ENVIRONMENT &amp; INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Obligated Amount for this Modification: \$85,000.00 Incremental Funded Amount changed from \$41,000.00 to \$126,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 20-21-C-58D5-000A45-2505-2058DC0071-001 Beginning FiscalYear 20 Ending Fiscal Year 21 Fund (Appropriation) C Budget Organization 58D5 Program (PRC) 000A45 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2058DC0071-001 Amount: \$85,000.00 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Period of Performance: 07/09/2020 to 07/08/2021</p>				

EP-W-16-015  
Order#: 68HERH20F0336 (4006)  
Modification#: P00001

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	\$41,000.00	\$85,000.00	\$126,000.00
<b>Total</b>	<b>\$41,000.00</b>	<b>\$85,000.00</b>	<b>\$126,000.00</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$189,837.00
<b>Total</b>	<b>-</b>	<b>-</b>	<b>\$189,837.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, &amp; 30</i>				1. REQUISITION NUMBER PR-OAR-20-01042		PAGE OF 1 8		
2. CONTRACT NO. EP-W-16-015			3. AWARD/ EFFECTIVE DATE 07/09/2020		4. ORDER NUMBER 68HERH20F0339		5. SOLICITATION NUMBER	
6. SOLICITATION ISSUE DATE			7. <b>FOR SOLICITATION INFORMATION CALL:</b>		a. NAME Michael Fox		b. TELEPHONE NUMBER (No collect calls) 202-564-2550	
8. OFFER DUE DATE/LOCAL TIME ET			9. ISSUED BY HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460		10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED OR <input type="checkbox"/> SET ASIDE: % FOR:  <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> HUBZONE SMALL BUSINESS <input type="checkbox"/> SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS <input type="checkbox"/> WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM <input type="checkbox"/> EDWOSB <input type="checkbox"/> 8(A) NAICS: 541620 SIZE STANDARD: \$15.0			
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input checked="" type="checkbox"/> SEE SCHEDULE			12. DISCOUNT TERMS		13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		13b. RATING	
15. DELIVER TO OAR/OAP US Environmental Protection Agency 1200 Pennsylvania Avenue NW Mail Code: 62101J OAR/OAP Washington DC 20460			16. ADMINISTERED BY HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460		14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input type="checkbox"/> RFP			
17a. CONTRACTOR/ OFFEROR CODE 038086125 FACILITY CODE			18a. PAYMENT WILL BE MADE BY RTP FMC		WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972  (b)(4) TELEPHONE NO.		18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM	
19. ITEM NO.			20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY		22. UNIT
23. UNIT PRICE			24. AMOUNT					
25. ACCOUNTING AND APPROPRIATION DATA See Schedule			26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$61,789.00					
27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA			27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4, FAR 52.212-5 IS ATTACHED. ADDENDA			28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.		
29. AWARD OF CONTRACT: DATED . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:			30a. SIGNATURE OF OFFEROR/CONTRACTOR			31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)  Michael C. Fox ELECTRONIC SIGNATURE		
30b. NAME AND TITLE OF SIGNER (Type or print)			30c. DATE SIGNED			31b. NAME OF CONTRACTING OFFICER (Type or print) Michael C. Fox		
31c. DATE SIGNED 06/30/2020								

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	<p>24, 2020 (8 pages) in the amount of \$61,789.00.</p> <p>This is a Time-and-Materials (T&amp;M) task order with a total ceiling price of \$61,789.00, which the Contractor is not authorized to exceed. The Contractor exceeds at its own risk. The total obligated/funded ceiling amount for this order is currently \$20,000.00. This order is incrementally funded as detailed in Attachment B Summary of Amounts and Ceilings and Attachment B is hereby incorporated (1 page).</p> <p>Contracting Officer's Representative (COR) for this task order: Tim Sharac, (202) 343-9180, Sharac.Timothy@epa.gov</p> <p>Alternate COR: Melissa Puchalski, (202) 343-9882, Puchalski.Melissa@epa.gov</p> <p>The services of this order are for severable. TOCOR: Tim Sharac Period of Performance: 07/09/2020 to 07/08/2021</p> <p>Technical Systems Audits Incrementally Funded Amount: \$20,000.00</p> <p>Accounting Info: 20-21-C-58D5-000A45-2505-2058DC0062-001 BFY: 20 Continued ...</p>				61,789.00

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED    ☐ INSPECTED    ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: \_\_\_\_\_

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE			32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
			32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT  <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				
38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY		
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY (Print)		
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		42b. RECEIVED AT (Location)		
		42c. DATE REC'D (YY/MM/DD)		42d. TOTAL CONTAINERS

NAME OF OFFEROR OR CONTRACTOR

WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	EFY: 21 Fund: C Budget Org: 58D5 Program (PRC): 000A45 Budget (BOC): 2505 DCN - Line ID: 2058DC0062-001 Funding Flag: Complete Funded: \$20,000.00				



**ATTACHMENT A**  
Statement of Work

**Title:** CASTNET Technical Systems Audit (4009)  
**Contractor:** Wood Environment & Infrastructure Solutions Inc.  
**Contract #:** EP-W-16-015  
**Task Order #:** 68HERH20F0339  
**Period of Performance:** 07/09/2020 - 07/08/2021

**EPA Key Personnel**

**Task Order Project Officer (TOPO):**

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**Alternate TOPO:**

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**Contracting Officer (CO):**

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Contracting Officer  
Administrative Contract Service Center  
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Mail Code 3803R  
Washington DC 20460  
*phone:* (202) 564-2550  
*email:* [fox.michael@epa.gov](mailto:fox.michael@epa.gov)

## **STATEMENT OF WORK**

### **I. INTRODUCTION**

The Clean Air Status and Trends Network (CASTNET) is a long-term monitoring network designed to measure acidic pollutants and ambient ozone concentrations in rural areas. CASTNET is managed collaboratively by the Environmental Protection Agency – Clean Air Markets Division (EPA), the National Park Service – Air Resources Division (NPS), and the Bureau of Land Management – Wyoming State Office (BLM-WSO). In addition to EPA, NPS, and BLM-WSO, numerous other participants including tribes, other federal agencies, States, private landowners, and universities provide network support. The EPA contractor, Wood Environment & Infrastructure Solutions, Inc. (Wood), operates the EPA-sponsored sites while the NPS and BLM-WSO contractor, Air Resource Specialists, Inc. (ARS), operates the remaining sites.

### **II. PURPOSE**

CASTNET O<sub>3</sub> data are used to calculate design values for all sites where data completeness requirements are met. The CASTNET monitoring program follows the quality assurance/quality control procedures and schedules to meet the regulatory requirements described in 40 CFR Parts 50, 53 and 58. The required QA/QC protocols include daily zero/span/precision checks, quarterly data submittals to EPA's Air Quality System (AQS) database, annual performance evaluations of the ozone analyzers by an independent auditor, and a 3-year facility technical systems audit (TSA). The purpose of this task is to fulfill the requirement for the TSA at the ARS facility. An independent auditor will review ARS' procedures on all aspects of the ozone monitoring program, including data handling, quality assurance procedures and documentations, calibrations and field operations. The purpose of a TSA is to provide a complete and accurate assessment of a monitoring organization's ambient air monitoring program. The TSA will verify that the QA procedures and data collection/reporting follow the regulatory requirements as described in 40 CFR Parts 50, 53 and 58 as well as follow ARS' procedures detailed in their QAPP. The contractor shall visit the ARS ambient air monitoring laboratory to assess compliance as well as visit a ARS-operated monitoring site.

### **III. CONTRACT LEVEL STATEMENT OF WORK REFERENCE**

The tasks to be performed under this task order are consistent with the activities authorized in Task 22 (Level of Effort) of the contract's Statement of Work.

### **IV. TECHNICAL DIRECTION**

#### **1. Prepare Work Plan**

The Contractor shall prepare a Task Order Proposal and Cost Estimate (TP&CE) in accordance with the terms and conditions of contract clauses B.1 entitled Fixed Rates for Services – Indefinite delivery/Indefinite quantity.

The contractor shall ensure that all requirements of this task order are met through performance metrics and quality assurance reviews including but not limited to establishing the project in a tracking system, reviewing and approving technical proposals and cost estimates, and QA of all deliverables.

#### **2. Technical Systems Audit**

The contractor shall prepare for the Technical Systems Audit (TSA) by providing the independent auditor with requested QA documents, SOPs, reports, etc. The independent auditor will prepare three questionnaires (one each for the field audit, data management and field laboratory). ARS should review these questionnaires prior to the TSA and provide any feedback to the independent auditor. A template for the TSA questionnaire is available in Appendix A of *Conducting Technical Systems Audits of Ambient Air Monitoring Programs document # EPA-454/B-17-004 November 2017*. A technical systems audit is an on-site review and inspection of a monitoring organization's ambient air monitoring program to assess its compliance with regulations governing the collection, analysis, validation, and reporting of ambient air quality data. The questions should address planning, field operations, laboratory operations, quality assurance and quality control, data management, reporting,

Prior to the on-site evaluation the planning period, the independent auditor shall request and review three years of ambient monitoring ozone data, 1-point quality control check points, annual performance evaluation audit results, national performance audit program (NPAP) audit results, and QA documents used by the monitoring agency for their ozone monitoring program including their QAPP, SOPs and the Annual Network Plan.

The independent auditor shall follow the US EPA's quality assurance guidance document for conducting technical systems audits entitled, *Conducting Technical Systems Audits of Ambient Air Monitoring Programs document # EPA-454/B-17-004 November 2017*. The contractor shall visit the ARS' facility and conduct staff interviews using a prepared questionnaire. The independent auditor may request additional documentation such as training documents or calibration verifications. The independent auditor shall review one-minute data and verify the results support the data being submitted to AQS.

The field audit will be performed at a CASTNET site selected by ARS and the independent auditor. ARS shall coordinate with the site operators at the selected site prior to the independent auditor's visit.

The contractor shall answer all questions on the three questionnaires and provide any requested information to the auditor during the site visits (at the monitoring site and the ARS facility).

If requested by the project officer due to stay-at-home orders or other travel-related restrictions, the independent auditor may be required to perform all work remotely including questionnaires, data reviews, interviews, and field audits.

### **3. Reporting**

The independent auditor will conduct a brief closeout with ARS while at the facility. After the TSA is complete, the independent auditor will provide Wood with a draft report containing the results from the questionnaires. Wood will share this report with ARS. ARS will provide feedback and provide clarification for any finding reported in the draft report. Wood will provide a copy of the final report to EPA, NPS, and BLM-WSO.

## **V. DELIVERABLES**

### **1. Task Order Technical Proposal and Cost Estimate**

The contractor shall deliver a Task Order Proposal and Cost Estimate in accordance with clause B.7 Task Order Ordering Procedures of the contract and section IV.1 of this SOW. The TP&CE shall be delivered within 10 days of the issuance of this task order.

## **2. Monthly Progress Report**

The contractor shall prepare and submit a monthly progress report by the 15<sup>th</sup> of each month summarizing the progress made, issues encountered or expected, work planned for the next reporting period and costs. These reports shall comply with contract clauses F.1 Monthly Progress Report and F.5 Reports of Work. Reports shall be delivered electronically.

## **3. Final TSA Report**

The contractor shall submit the final TSA report from the independent auditor to EPA, NPS, and BLM-WSO by 30 days after the end of the task order period.

Additional deliverables may be required as part of future technical direction.

## **VI. SCHEDULE**

The work plan shall be delivered within 10 days of issuance of this task order.

### **Distribution of Deliverables:**

Addressee	Copies
EPA Contracting Officer (Mike Fox)	1
EPA TOPO (Timothy Sharac)	1
EPA PO (Melissa Puchalski)	1

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	-	\$20,000.00	\$20,000.00
<b>Total</b>	-	<b>\$20,000.00</b>	<b>\$20,000.00</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$61,789.00
<b>Total</b>	-	-	<b>\$61,789.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1      2	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00001		See Block 16C		PR-OAR-20-01282		4009	
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
HQAD							
HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972							
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-W-16-015			
				68HERH20F0339			
				10B. DATED (SEE ITEM 13)			
				06/30/2020			
CODE 038086125		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$40,000.00	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) EPA-B-32-103 - LIMITATION OF GOVERNMENTS OBLIGATION						
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 038086125							
The purpose of this modification is to obligate incremental funding in the amount of \$40,000.00 to this task order.							
TOCOR: Tim Sharac							
LIST OF CHANGES:							
Reason for Modification: Funding Only Action							
Obligated Amount for this Modification: \$40,000.00							
New Total Obligated Amount for this Award: \$60,000.00							
Incremental Funded Amount changed: from \$20,000.00 to \$60,000.00							
CHANGES FOR LINE ITEM NUMBER: 1							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Michael C. Fox			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
				ELECTRONIC SIGNATURE 		08/13/2020	
(Signature of person authorized to sign)				(Signature of Contracting Officer)			

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-W-16-015/68HERH20F0339/P00001	2	2

NAME OF OFFEROR OR CONTRACTOR

WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Obligated Amount for this Modification: \$40,000.00 Incremental Funded Amount changed from \$20,000.00 to \$60,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 20-21-C-58D5-000A45-2505-2058DC0072-001 Beginning FiscalYear 20 Ending Fiscal Year 21 Fund (Appropriation) C Budget Organization 58D5 Program (PRC) 000A45 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2058DC0072-001 Amount: \$40,000.00 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Period of Performance: 07/09/2020 to 07/08/2021</p>				

EP-W-16-015  
Order#: 68HERH20F0339 (4009)  
Modification#: P00001

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	\$20,000.00	\$40,000.00	\$60,000.00
<b>Total</b>	<b>\$20,000.00</b>	<b>\$40,000.00</b>	<b>\$60,000.00</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$61,789.00
<b>Total</b>	<b>-</b>	<b>-</b>	<b>\$61,789.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).



<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, &amp; 30</i>				1. REQUISITION NUMBER PR-OAR-20-01072		PAGE OF 1 10							
2. CONTRACT NO. EP-W-16-015			3. AWARD/ EFFECTIVE DATE		4. ORDER NUMBER 68HERH20F0340		5. SOLICITATION NUMBER						
							6. SOLICITATION ISSUE DATE						
7. <b>FOR SOLICITATION INFORMATION CALL:</b>			a. NAME Michael Fox			b. TELEPHONE NUMBER (No collect calls) 202-564-2550		8. OFFER DUE DATE/LOCAL TIME ET					
9. ISSUED BY  HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460			CODE HQAD		10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED OR <input type="checkbox"/> SET ASIDE: % FOR:  <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> SMALL BUSINESS  <input type="checkbox"/> HUBZONE SMALL BUSINESS  <input type="checkbox"/> SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS </div> <div> <input type="checkbox"/> WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM  <input type="checkbox"/> EDWOSB  <input type="checkbox"/> 8(A) </div> <div> NAICS: 541620   SIZE STANDARD: \$15.0 </div> </div>								
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input checked="" type="checkbox"/> SEE SCHEDULE			12. DISCOUNT TERMS			13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) <input type="checkbox"/>		13b. RATING					
15. DELIVER TO  OAR/OAP US Environmental Protection Agency 1200 Pennsylvania Avenue NW Mail Code: 62101J OAR/OAP Washington DC 20460			CODE OAR/OAP		16. ADMINISTERED BY  HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460				CODE HQAD				
17a. CONTRACTOR/ OFFEROR			CODE 038086125		FACILITY CODE		18a. PAYMENT WILL BE MADE BY  RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711						
							CODE RTP FMC						
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972													
TELEPHONE NO. (b)(4)													
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER					<input type="checkbox"/> 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM								
19. ITEM NO.		20. SCHEDULE OF SUPPLIES/SERVICES				21. QUANTITY		22. UNIT		23. UNIT PRICE		24. AMOUNT	
		DUNS Number: 038086125 Title: Supplemental Monitoring Studies at CASTNET Sites in Support of the NOx/SOx Secondary Standard (4010)  This task order is issued in accordance with Task Order Ordering Procedures and hereby incorporates the base contract terms and conditions by reference. The effective date for performance to commence is July 9, 2020. The Contractor shall perform in accordance with Attachment A - <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>											
25. ACCOUNTING AND APPROPRIATION DATA See Schedule								26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$196,332.00					
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA								<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.					
<input checked="" type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA								<input type="checkbox"/> ARE <input checked="" type="checkbox"/> ARE NOT ATTACHED.					
<input type="checkbox"/> 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.								<input type="checkbox"/> 29. AWARD OF CONTRACT: _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:					
30a. SIGNATURE OF OFFEROR/CONTRACTOR						31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)   ELECTRONIC SIGNATURE							
30b. NAME AND TITLE OF SIGNER (Type or print)				30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (Type or print) Michael C. Fox				31c. DATE SIGNED 07/01/2020			

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	<p>Statement of Work (6 pages) and the accepted technical proposal and cost estimate dated June 26, 2020 (11 pages) in the amount of \$196,332.00.</p> <p>This is a Time-and-Materials (T&amp;M) task order with a total ceiling price of \$196,332.00, which the Contractor is not authorized to exceed. The Contractor exceeds at its own risk. The total obligated/funded ceiling amount for this order is currently \$50,000.00. This order is incrementally funded as detailed in Attachment B Summary of Amounts and Ceilings and Attachment B is hereby incorporated (1 page).</p> <p>Contracting Officer's Representative (COR) for this task order: Melissa Puchalski, (202) 343-9882, Puchalski.Melissa@epa.gov</p> <p>Alternate COR: Taylor Macy (202) 343-9183, Macy.Taylor@epa.gov</p> <p>The services of this order are for severable. TOCOR: Melissa Puchalski Period of Performance: 07/09/2020 to 07/08/2021</p> <p>Supplemental Monitoring Studies at CASTNET Sites in Support of the NOx SOx Secondary Standard Incrementally Funded Amount: \$50,000.00 Continued ...</p>				196,332.00

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED    ☐ INSPECTED    ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: \_\_\_\_\_

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE			32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
			32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT  <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				
38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY		
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY ( <i>Print</i> )		
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		42b. RECEIVED AT ( <i>Location</i> )		
		42c. DATE REC'D (YY/MM/DD)		42d. TOTAL CONTAINERS

NAME OF OFFEROR OR CONTRACTOR  
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Accounting Info: 20-21-C-58D5-000A45-2505-2058DC0064-001 BFY: 20 EFY: 21 Fund: C Budget Org: 58D5 Program (PRC): 000A45 Budget (BOC): 2505 DCN - Line ID: 2058DC0064-001 Funding Flag: Complete Funded: \$50,000.00				

**ATTACHMENT A**  
**Statement of Work**

**Title:** Supplemental Monitoring Studies at CASTNET Sites in Support of the NO<sub>x</sub>/SO<sub>x</sub> Secondary Standard (4010)  
**Contractor:** Wood Environment & Infrastructure Solutions, Inc.  
**Contract #:** EP-W-16-015  
**Task Order #:** 68HERH20F0340  
**Period of Performance:** 7/9/2020 to 7/8/2021

**EPA Key Personnel**

**Task Order Project Officer (TOPO)/Contract Level Project Officer (PO):**

Melissa Puchalski  
Clean Air Markets Division (OAR/OAP/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9882  
*email:* puchalski.melissa@epa.gov

**Alternate TOPO:**

Taylor Macy  
Clean Air Markets Division (OAR/OAP/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9183  
*email:* macy.taylor@epa.gov

**Contracting Officer (CO):**

Michael Fox  
Contracting Officer  
Administrative Contract Service Center  
1200 Pennsylvania Ave N.W.  
Mail Code 3803R  
Washington DC 20460  
*phone:* (202) 564-2550  
*email:* [fox.michael@epa.gov](mailto:fox.michael@epa.gov)

## STATEMENT OF WORK

### I. INTRODUCTION

The Clean Air Status and Trends Network (CASTNET) is a long-term environmental monitoring network that measures changes in ambient air quality and assesses atmospheric deposition over broad geographic regions of the U.S. (<https://www.epa.gov/castnet>). Operating since 1987, CASTNET has evolved into a robust regional monitoring program which currently consists of approximately 95 monitoring stations nationwide. The Environmental Protection Agency (EPA) coordinates the operation of the network in cooperation with numerous federal, tribal, state and local partners.

The primary monitoring objectives of CASTNET are to:

- Provide high quality data on atmospheric deposition, rural ground level ozone and other forms of atmospheric pollution;
- Support the primary and secondary ozone NAAQS and provide data on NAAQS compliance in rural areas;
- Monitor the status and trends in regional air quality and atmospheric deposition;
- Assess and report on geographic patterns and long-term, temporal trends in ambient air pollution and atmospheric deposition;
- Improve our understanding of PM and ozone formation;
- Validate and improve atmospheric models;
- Provide data for health-based research and epidemiology studies;
- Assess the effectiveness of EPA's emission reduction programs; and
- Support science and ecosystem studies.

CASTNET sites measure weekly average concentrations of sulfate ( $\text{SO}_4^{2-}$ ), nitrate ( $\text{NO}_3^-$ ), ammonium ( $\text{NH}_4^+$ ), sulfur dioxide ( $\text{SO}_2$ ), nitric acid ( $\text{HNO}_3$ ), chloride ( $\text{Cl}^-$ ) and the base cations ( $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$  and  $\text{Ca}^{2+}$ ) using a 3-stage filter pack. In addition, each site may make ancillary measurements, including hourly ozone ( $\text{O}_3$ ), hourly meteorology, ammonia ( $\text{NH}_3$ ) gas using passive devices, and trace-level gases. Trace-level gas monitors include reactive oxidized nitrogen ( $\text{NO}_y$ ), nitric oxide ( $\text{NO}$ ), sulfur dioxide ( $\text{SO}_2$ ) and carbon monoxide ( $\text{CO}$ ). CASTNET  $\text{O}_3$ , meteorological, and trace gas measurements follow the requirements in the Code of Federal Regulations (CFR) and EPA's Quality Assurance Handbook.

### II. PURPOSE

The primary purpose of this task order is to improve the science and understanding of deposition processes within the atmosphere. The EPA is currently evaluating the secondary National Ambient Air Quality Standard (NAAQS) for  $\text{NO}_x$ ,  $\text{SO}_x$  and  $\text{PM}_{2.5}$ . The work under this task will enhance the existing research currently available on direct deposition methods, atmospheric chemical and meteorological processes that drive deposition parameters, and provide estimates of sulfur and nitrogen loadings to various landscapes. This research is a collaborative effort between EPA's Office of Air and Radiation (OAR), the Office of Research and Development (ORD), and other federal partners. This is a follow-on task order from the previous option periods. A summary of the tasks is provided below.

**Enhanced  $\text{NO}_y$  System:** Under this task order the contractor will continue to operate the enhanced  $\text{NO}_y$  analyzer at the Duke Forest flux tower site (DUK008) located in Durham, North Carolina. The enhanced  $\text{NO}_y$  analyzer provides hourly concentrations of oxidized and reduced nitrogen species using direct measurements and calculated values (difference method). Concentrations from the enhanced  $\text{NO}_y$  analyzer will be compared

co-located measurements including the CASTNET filter pack, Ecophysics fast-response NO<sub>y</sub> flux system, Piccaro NH<sub>3</sub> analyzer, and passive ammonia (NH<sub>3</sub>) samplers. Additional testing of the HNO<sub>3</sub> denuder channel will be performed at the Wood facility to reduce the interferences and improve the accuracy.

**Fast-Response Ecophysics:** The contractor shall install the modified Ecophysics system at the Duke Forest flux tower site (DUK008). The converter shall be placed near the top of the tower. During installation the calibration system designed for the enhanced NO<sub>y</sub> system will be integrated into the Ecophysics for routine quality control checks. Calibration data shall be polled by the contractor and submitted during routine data submittals to EPA.

**Eddy Flux Tower Profile Sampling System:** The contractor shall construct and install a system to facilitate sampling of air from multiple (5) heights on the eddy flux tower at Duke Forest (DUK008). The system will be designed so air may be sampled from multiple heights simultaneously or sampled from a single height.

**Eddy Flux Tower Particulate Sampling System:** The contractor shall design and install a system for sampling particulate matter near the top of the eddy flux tower at Duke Forest (DUK008).

**Piccaro Calibration Integration:** The contractor shall incorporate the enhanced NO<sub>y</sub> calibration system into the Piccaro NH<sub>3</sub> analyzer's QC procedure at the DUK008 site. This includes updating the data logger program to include challenging the Piccaro with NH<sub>3</sub> gas on a routine basis and collecting and reporting the QC results.

**AMoN Site Characterization Database/Report:** The contractor shall continue QA'ing and documenting the field and laboratory data collected during the previous periods of performance. Specifically, the contractor shall assist EPA in transitioning raw data to a consistent data format. The contractor shall help with formatting and review of a final report for the study

**Wet-Soluble Organic Nitrogen Study:** The contractor shall evaluate the stability of samples analyzed and stored under the previous option period. Additionally, the contractor shall analyze extracts for total nitrogen utilizing the Shimadzu analyzer from 20 sites selected by EPA for a 12-month period. Finally, the contractor shall assist EPA with writing a Quality Assurance Project Plan for measuring wet-soluble organic nitrogen.

### III. CONTRACT LEVEL STATEMENT OF WORK REFERENCE

The tasks to be performed under this task order are consistent with the activities authorized in Task 22 (Level of Effort) of the contract's Statement of Work for Contract EP-W-16-015.

### IV. TECHNICAL DIRECTION

#### 1. Prepare a Technical Proposal & Cost Estimate

The Contractor shall prepare a Task Order Technical Proposal and Cost Estimate (TP&CE) in accordance with the terms and conditions of clauses B.1 entitled Fixed Rates for Services – Indefinite delivery/Indefinite quantity in the contract (EP-W-16-015). The contractor shall deliver the TP&CE to EPA within 10 days after receipt of the SOW.

#### 2. Operate, Calibrate, and Quality Assure the Enhanced-NO<sub>y</sub> Measurement System

The Contractor shall continue operating the enhanced-NO<sub>y</sub> measurement system at the Duke Forest Flux Tower site (DUK008) which is co-located with a CASTNET filter pack. Operation includes routine calibrations, remote troubleshooting, QA, and data reporting. The operation of the standard NO<sub>y</sub> system and the CASTNET filter pack is covered under the Base Program Task Order (4003). The enhanced NO<sub>y</sub> system shall be calibrated

during the routine quarterly calibration trips supported under the Base Program Task Order (4003). Remote troubleshooting shall be used as needed.

Hourly measurements from the enhanced NO<sub>y</sub> system include NH<sub>3</sub>, NH<sub>x</sub>, TN<sub>x</sub> (total nitrogen – NH<sub>x</sub> + NO<sub>y</sub>), true NO<sub>2</sub>, NO<sub>y</sub>, NO, and HNO<sub>3</sub>. The contractor shall perform automated quality control checks of the analyzer's converters at least once per week. Data from the enhanced NO<sub>y</sub> measurement system shall be delivered to CAMD daily with the routine CASTNET submittals. Quality assured data shall be submitted to CAMD monthly, 90 days after data collection.

Under this task the contractor shall also continue testing the converters and denuders for a configuration that provides the most reliable, accurate data as compared to the CASTNET filter pack, AMoN and co-located continuous measurements collected at Duke Forest. Specifically, the contractor shall work to improve the HNO<sub>3</sub> measurements by setting up a test system at their facility. The NaCl denuders are not selectively scrubbing HNO<sub>3</sub> from the air causing unexpected results.

This task includes four repair trips for the enhanced NO<sub>y</sub> measurement system that shall only be used as necessary. Remote troubleshooting shall be utilized when possible and routine calibration trips are covered under Task Order 4003 Base Program.

Finally, the contractor shall work with EPA to write a manuscript documenting the enhanced NO<sub>y</sub> system, methods and performance.

### **3. Installation of Fast-Response Ecophysics System at DUK008, NC**

The contractor shall complete testing and characterization of the converter/analyzer package if it is not completed under Option Period III (Task Order 3010). Once the testing is complete, the contractor shall install the Ecophysics system at DUK008 with the modified converter in the summer (July/August). The converter shall be placed near the top of the flux tower. At the time of the installation, the contractor shall integrate the calibration gas delivery system from the enhanced NO<sub>y</sub> system into the Ecophysics QC procedure for routine, automated QC checks. The contractor shall use the data logger procured under the previous Option Period (Task Order 2010) for programming the Ecophysics automated zero, span and precision checks. Zero checks may need to be performed frequently using the existing Ecophysics zero system, which can be programmed to run zero air through the inlet and the photomultiplier tube (PMT).

Ambient and QC data from the Ecophysics shall be polled by the contractor's data acquisition system and reported in the CASTNET database and ORD database.

### **4. Eddy Flux Tower Profile Sampling System**

The contractor shall construct and install a system to facilitate sampling of air from multiple (5) heights on the eddy flux tower at Duke Forest. The system will comprise of Teflon sampling lines, heated umbilical, pump, valves, manifold to interface with analytical equipment (multi-port to allow simultaneous sampling by 4-6 instruments located in the cabin at the base of the tower) and electronics needed to switch valves in a programable sequence. The system shall be designed such that when air is actively sampled from a single height, bypass flow is pulled through the other inlets.

### **5. Eddy Flux Tower Particulate Sampling System**

The contractor shall construct and install a system for sampling particulate matter from the top of the eddy flux tower by instruments located at the base of the tower or in the instrument cabin. The system shall comprise a single inlet at the top of the tower, an unheated sample line/pipe of suitable material, a blower to pull air through the sampling line to the ground and manifold for interfacing with analytical equipment at the base of the tower.



## **6. Piccaro Calibration Integration**

The contractor shall integrate the enhanced total NO<sub>y</sub> calibration system into EPA/ORD's Piccaro NH<sub>3</sub> analyzer's QC procedure. The Piccaro analyzer will be installed by EPA/ORD in July. The contractor shall integrate the calibration system with the Piccaro during the Ecophysics installation trip (Task 3). The contractor shall work with EPA's ORD to determine the parameters to use in the data logger program and challenge concentrations needed for routine QC checks. The contractor shall poll the QC results and deliver data to EPA within 24 hours with the regularly scheduled gas-calibration data submittals.

## **7. Ammonia Flux Site Characterization Database**

Under previous option periods the contractor installed measurement systems to collect soil moisture and temperature, 3D wind direction, and CASTNET meteorology at three CASTNET sites (BVL130, DUK008, and CHA467) to develop a database of site characteristics needed for modeling the bi-directional flux of NH<sub>3</sub>. The contractor also visited each site to collect soil and vegetation samples for analysis by the North Carolina State University laboratory. This task is a continuation of this work.

The contractor shall format and document all of the data from the study into a consistent database format including the site information, sensor data, QA/QC results, and analytical data. The database shall be delivered to EPA CAMD by October 1, 2020.

Once EPA sends the contractor a draft final report for the study, the contractor shall perform a review of the figures and tables and then format the report into a searchable PDF file. The contractor shall submit a draft of the formatted report to EPA CAMD 30 days after receipt of the EPA draft. A final report shall be delivered to EPA 30 days after final comments are received.

## **8. Wet-Soluble Organic Nitrogen Analysis**

This work is a continuation of work under the previous Task Order (3010) for developing a method to analyze total nitrogen from the CASTNET Teflon filter pack extracts from a select number of sites. Under the previous option period, total nitrogen was measured by running the Teflon filter extracts through the EPA/ORD Shimadzu analyzer. Five pilot sites were selected for the 3-month pilot study (KIC003, SAL133, WSP144, GRS420, and ROM206). The preliminary results show that organic nitrogen is detectable with this method and the values are consistent with the literature. The contractor shall perform sample reruns from the initial pilot study to test the stability on a routine schedule.

The Task Order Project Office will provide technical direction for the contractor to analyze samples from 25 CASTNET sites for 1-year using the total Nitrogen Shimadzu analyzer following the established SOP (GLM-3180-012 Determination of Total Nitrogen in Water and Air Filters by Chemiluminescence for Acid Deposition Projects). The EPA will provide a list of the 20 CASTNET sites. At two of the sites duplicate filter packs shall be operated to assess the precision of the total nitrogen and organic nitrogen measurements. Additionally, throughout the year, 80 additional QA/QC samples shall be run (i.e. field and laboratory blanks). The contractor shall deliver a dataset of analyzed, quality assured concentration data on the normal monthly data delivery schedule with documented metadata.

With technical direction from the project officer, the contractor shall develop a QAPP for measuring wet-soluble organic nitrogen using this method. The QAPP will be developed and finalized with input from ORD.

## **V. DELIVERABLES AND SCHEDULE**



## **1. Proposal**

The contractor shall deliver a Task Order Technical Proposal & Cost Estimate in accordance with clause B.7 Task Order Ordering Procedures of the contract. The proposal shall be submitted 10 days after receipt of the SOW.

## **2. Monthly Progress Report**

The contractor shall prepare and submit a monthly progress report by the 15<sup>th</sup> of each month summarizing the progress made, issues encountered or expected, work planned for the next reporting period and costs. These reports shall comply with contract clauses F.1, Monthly Progress Report, and F-5, Reports of Work. Reports shall be delivered electronically.

## **3. Site Characterization Database**

The contractor shall deliver final archived database with valid data and all QA/QC data reported during the field campaign. The database shall include tables with LAI, soil moisture and temperature, corrected 3D wind velocity, laboratory results, and calculated fluxes using soil and vegetation compensation points for the three pilot sites. The contractor shall deliver the final database to EPA by October 1<sup>st</sup> 2020.

## **4. Site Characterization Study Publication**

The contractor shall deliver a single searchable PDF file of the AMoN Site Characterization Report. EPA will provide the contractor with a word version of the report. The contractor shall deliver a draft final and a final report as described under Task 5.

## **5. Enhanced NOy Manuscript**

The contractor shall work with EPA to develop a manuscript describing the methods, QA/QC procedures and results from the enhanced NOy system after testing of the HNO<sub>3</sub> denuder results in an improved concentration value.

### **Distribution of Deliverables:**

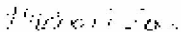
Addressee	Copies
EPA Contracting Officer (Mike Fox)	1
EPA Project Officer (Melissa Puchalski)	1
EPA Alternate (Taylor Macy)	1
EPA Technical Advisors (Ralph Baumgardner and John Walker)	1

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	-	\$50,000.00	\$50,000.00
<b>Total</b>	-	<b>\$50,000.00</b>	<b>\$50,000.00</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$196,332.00
<b>Total</b>	-	-	<b>\$196,332.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1      2	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00001		See Block 16C		PR-ORD-20-01864		4010	
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
HQAD							
US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x) 9A. AMENDMENT OF SOLICITATION NO.			
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO. EP-W-16-015 68HERH20F0340			
				10B. DATED (SEE ITEM 13)			
CODE 038086125		FACILITY CODE		07/01/2020			
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$176,000.00	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) Mutual Agreement of the Parties						
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 038086125							
The purpose of this modification is to:							
1.) Incorporate the revised statement of work in accordance with Attachment A, Statement of Work (7 pages) dated August 6, 2020 and the revised technical and cost proposal dated August 11, 2020 (12 pages).							
2.) Increase the ceiling price of this task order. The total price of this task order is being increased by \$93,000.00, from \$196,332.00 to \$289,937.00.							
3.) Obligate incremental funding in the amount of \$176,000.00 to this task order. This task Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Michael C. Fox			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		ELECTRONIC SIGNATURE 08/13/2020	

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-W-16-015/68HERH20F0340/P00001	2	2

NAME OF OFFEROR OR CONTRACTOR

WOOD ENVIRONMENT &amp; INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>order is incrementally funded as detailed in Attachment B Summary of Amounts and Ceilings and Attachment B is hereby incorporated (1 page).  TOCOR: Melissa Puchalski  LIST OF CHANGES:  Reason for Modification: Funding Only Action  Total Amount for this Modification: \$93,605.00  New Total Amount for this Version: \$289,937.00  New Total Amount for this Award: \$289,937.00  Obligated Amount for this Modification: \$176,000.00  New Total Obligated Amount for this Award: \$226,000.00  Incremental Funded Amount changed: from \$50,000.00 to \$226,000.00  CHANGES FOR LINE ITEM NUMBER: 1  Total Amount changed from \$196,332.00 to \$289,937.00  Obligated Amount for this Modification: \$176,000.00  Incremental Funded Amount changed from \$50,000.00 to \$226,000.00</p> <p>NEW ACCOUNTING CODE ADDED:  Account code:  20-21-C-26A2000-000FK6XR2-2532-26A5C-2026A2E023-001  Beginning FiscalYear 20  Ending Fiscal Year 21  Fund (Appropriation) C  Budget Organization 26A2000  Program (PRC) 000FK6XR2  Budget (BOC) 2532  Job # (Site/Project)  Cost Organization 26A5C  DCN-LineID 2026A2E023-001  Amount: \$176,000.00  Subject To Funding: N  Payment Address:</p> <p>Payment:  RTP Finance Center  US Environmental Protection Agency  RTP-Finance Center (AA216-01)  109 TW Alexander Drive  www2.epa.gov/financial/contracts  Durham NC 27711  Period of Performance: 07/09/2020 to 07/08/2021</p>				

**ATTACHMENT A**

**Statement of Work**

*(revised 8-6)*

**Title:** Supplemental Monitoring Studies at CASTNET Sites in Support of the NOx/SOx Secondary Standard (4010)  
**Contractor:** Wood Environment & Infrastructure Solutions, Inc.  
**Contract #:** EP-W-16-015  
**Task Order #:** 68HERH20F0340  
**Mod #:** P00001  
**Period of Performance:** 7/9/2020 to 7/8/2021

**EPA Key Personnel**

**Task Order Project Officer (TOPO)/Contract Level Project Officer (PO):**

Melissa Puchalski  
Clean Air Markets Division (OAR/OAP/CAMD)  
1200 Pennsylvania Ave., NW  
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Washington, DC 20460  
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*email:* puchalski.melissa@epa.gov

**Alternate TOPO:**

Taylor Macy  
Clean Air Markets Division (OAR/OAP/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9183  
*email:* macy.taylor@epa.gov

**Contracting Officer (CO):**

Michael Fox  
Contracting Officer  
Administrative Contract Service Center  
1200 Pennsylvania Ave N.W.  
Mail Code 3803R  
Washington DC 20460  
*phone:* (202) 564-2550  
*email:* fox.michael@epa.gov

## STATEMENT OF WORK

### I. INTRODUCTION

The Clean Air Status and Trends Network (CASTNET) is a long-term environmental monitoring network that measures changes in ambient air quality and assesses atmospheric deposition over broad geographic regions of the U.S. (<https://www.epa.gov/castnet>). Operating since 1987, CASTNET has evolved into a robust regional monitoring program which currently consists of approximately 95 monitoring stations nationwide. The Environmental Protection Agency (EPA) coordinates the operation of the network in cooperation with numerous federal, tribal, state and local partners.

The primary monitoring objectives of CASTNET are to:

- Provide high quality data on atmospheric deposition, rural ground level ozone and other forms of atmospheric pollution;
- Support the primary and secondary ozone NAAQS and provide data on NAAQS compliance in rural areas;
- Monitor the status and trends in regional air quality and atmospheric deposition;
- Assess and report on geographic patterns and long-term, temporal trends in ambient air pollution and atmospheric deposition;
- Improve our understanding of PM and ozone formation;
- Validate and improve atmospheric models;
- Provide data for health-based research and epidemiology studies;
- Assess the effectiveness of EPA's emission reduction programs; and
- Support science and ecosystem studies.

CASTNET sites measure weekly average concentrations of sulfate ( $\text{SO}_4^{2-}$ ), nitrate ( $\text{NO}_3^-$ ), ammonium ( $\text{NH}_4^+$ ), sulfur dioxide ( $\text{SO}_2$ ), nitric acid ( $\text{HNO}_3$ ), chloride ( $\text{Cl}^-$ ) and the base cations ( $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$  and  $\text{Ca}^{2+}$ ) using a 3-stage filter pack. In addition, each site may make ancillary measurements, including hourly ozone ( $\text{O}_3$ ), hourly meteorology, ammonia ( $\text{NH}_3$ ) gas using passive devices, and trace-level gases. Trace-level gas monitors include reactive oxidized nitrogen ( $\text{NO}_y$ ), nitric oxide ( $\text{NO}$ ), sulfur dioxide ( $\text{SO}_2$ ) and carbon monoxide ( $\text{CO}$ ). CASTNET  $\text{O}_3$ , meteorological, and trace gas measurements follow the requirements in the Code of Federal Regulations (CFR) and EPA's Quality Assurance Handbook.

### II. PURPOSE

The primary purpose of this task order is to improve the science and understanding of deposition processes within the atmosphere. The EPA is currently evaluating the secondary National Ambient Air Quality Standard (NAAQS) for  $\text{NO}_x$ ,  $\text{SO}_x$  and  $\text{PM}_{2.5}$ . The work under this task will enhance the existing research currently available on direct deposition methods, atmospheric chemical and meteorological processes that drive deposition parameters, and provide estimates of sulfur and nitrogen loadings to various landscapes. Additionally, work will include evaluating the analysis method for measuring 36 per- and polyfluoroalkyl substances (PFAS) in precipitation samples at 4 existing NADP/NTN sites. This research is a collaborative effort between EPA's Office of Air and Radiation (OAR), the Office of Research and Development (ORD), and other federal and state partners. This is a follow-on task order from the previous option periods. A summary of the tasks is provided below.

**Enhanced  $\text{NO}_y$  System:** Under this task order the contractor will continue to operate the enhanced  $\text{NO}_y$  system at the Duke Forest flux tower site (DUK008) located in Durham, North Carolina as part of a larger reactive

nitrogen flux study. Results from the enhanced NO<sub>y</sub> system will be compared co-located measurements including the CASTNET filter pack, Eco Physics fast-response NO<sub>y</sub> flux system, Picarro NH<sub>3</sub> analyzer, and passive ammonia (NH<sub>3</sub>) samplers. Additional testing of the HNO<sub>3</sub> denuder channel will be performed at the Wood facility to reduce the interferences and improve the accuracy.

**Fast-Response Eco Physics:** The contractor shall install the modified Eco Physics system at the DUK008 site. The converter shall be placed near the top of the tower. During installation the calibration system designed for the enhanced NO<sub>y</sub> system will be integrated into the Eco Physics for routine quality control (QC) checks. Calibration data shall be polled by the contractor and submitted during routine data submittals to EPA.

**Eddy Flux Tower Profile Sampling System:** The contractor shall construct and install a system to facilitate sampling of air from multiple (5) heights on the eddy flux tower at DUK008. The system will be designed so air may be sampled from multiple heights simultaneously or sampled from a single height.

**Eddy Flux Tower Particulate Sampling System:** The contractor shall design and install a system for sampling PM<sub>2.5</sub> near the top of the eddy flux tower at DUK008.

**Picarro Calibration Integration:** The contractor shall incorporate the enhanced NO<sub>y</sub> calibration system into the Picarro NH<sub>3</sub> analyzer's QC procedure at DUK008. This includes updating the data logger program to include challenging the Picarro with NH<sub>3</sub> gas on a routine basis and collecting and reporting the QC results.

**AMoN Site Characterization Database/Report:** The contractor shall continue QA'ing and documenting the field and laboratory data collected during the previous task orders from the AMoN site characterization study dataset. Specifically, the contractor shall assist EPA in transitioning raw data to a consistent data format. The contractor shall help with formatting and review of a final report for the study

**Wet-Soluble Organic Nitrogen Study:** The contractor shall evaluate the stability of wet-soluble organic nitrogen (WSO<sub>N</sub>) samples analyzed and stored under the previous option period. Additionally, the contractor shall analyze extracts for total nitrogen utilizing the Shimadzu analyzer from 20 sites selected by EPA in addition to the five sites currently participating in the WSO<sub>N</sub> study for a total of 25 sites. The study shall be conducted for a 12-month period. Finally, the contractor shall assist EPA with writing a Quality Assurance Project Plan (QAPP) for measuring WSO<sub>N</sub>.

**Pilot Study for Determination of PFAS Compounds in Precipitation:** The contractor shall work with the Wisconsin State Laboratory of Hygiene (WSLH) to procure/supply the materials needed for excess sample to be analyzed for PFAS. The 3 sites are existing NADP/NTN sites (Whiteface Mountain, NY98; Washington Crossing, NJ99; Duke Forest, NC30; and Freeport, ME96). The samples from these 3 sites will be analyzed for PFAS for 2 years but this task order only covers sampling from September 1, 2020 – July 8, 2021.

### III. CONTRACT LEVEL STATEMENT OF WORK REFERENCE

The tasks to be performed under this task order are consistent with the activities authorized in Task 22 (Level of Effort) of the contract's Statement of Work for Contract EP-W-16-015.

### IV. TECHNICAL DIRECTION

#### 1. Prepare a Technical Proposal & Cost Estimate

The Contractor shall prepare a Task Order Technical Proposal and Cost Estimate (TP&CE) in accordance with the terms and conditions of clauses B.1 entitled Fixed Rates for Services – Indefinite delivery/Indefinite quantity in the contract (EP-W-16-015). The contractor shall deliver the TP&CE to EPA within 10 days after receipt of the SOW.

## **2. Operate, Calibrate, and Quality Assure the Enhanced-NO<sub>y</sub> Measurement System**

The Contractor shall continue operating the enhanced-NO<sub>y</sub> measurement system at the DUK008 site. Operation includes routine calibrations, remote troubleshooting, QA, and data reporting. The operation of the standard NO<sub>y</sub> system is covered under the Base Program Task Order (4003). The equipment shall be audited and/or calibrated during the routine quarterly calibration trips supported under the Base Program Task Order (4003). Remote troubleshooting shall be used as needed.

Hourly measurements from the enhanced NO<sub>y</sub> system include NH<sub>3</sub>, NH<sub>x</sub>, TN<sub>x</sub> (total nitrogen – NH<sub>x</sub> + NO<sub>y</sub>), true NO<sub>2</sub>, NO<sub>y</sub>, NO, and HNO<sub>3</sub>. The contractor shall perform automated QC checks of the analyzer's converters at least once per week. Data from the enhanced NO<sub>y</sub> measurement system shall be delivered to CAMD daily with the routine CASTNET submittals. Quality assured data shall be submitted to CAMD monthly, 90 days after data collection.

Under this task the contractor shall also continue testing the converters and denuders for a configuration of the system that provides the most reliable, accurate data as compared to the CASTNET filter pack, AMoN and co-located continuous measurements collected at DUK008. Specifically, the contractor shall work to improve the HNO<sub>3</sub> measurements by setting up a test system at their facility. The NaCl denuders are not selectively scrubbing HNO<sub>3</sub> from the air causing unexpected results.

This task includes four repair trips for the enhanced NO<sub>y</sub> measurement system that shall only be used as necessary. Remote troubleshooting shall be utilized when possible and routine calibration trips are covered under Task Order 4003 Base Program.

Finally, the contractor shall work with EPA to write a manuscript documenting the enhanced NO<sub>y</sub> system methods, performance, and comparisons with other measurement methods including the CASTNET filter pack.

## **3. Installation of Fast-Response Eco Physics System at DUK008, NC**

The contractor shall complete testing and characterization of the converter/analyzer package if it is not completed under Option Period III (Task Order 3010). Once the testing is complete, the contractor shall install the Eco Physics system at DUK008 with the modified converter in the summer of 2020 (July/August). The converter shall be placed near the top of the flux tower. At the time of the installation, the contractor shall integrate the calibration gas delivery system from the enhanced NO<sub>y</sub> system into the Eco Physics QC procedure for routine, automated QC checks. The contractor shall use the data logger previously procured under Option Period II (Task Order 2010) for programming the Eco Physics automated zero, span, and precision checks. Zero checks may need to be performed frequently using the existing Eco Physics zero system, which can be programmed to run zero air through the inlet and the photomultiplier tube (PMT).

Ambient and QC data from the Eco Physics shall be polled by the contractor's data acquisition system and reported in the CASTNET and ORD databases.

## **4. Eddy Flux Tower Profile Sampling System**

The contractor shall construct and install a system to facilitate sampling of air from multiple (5) heights on the eddy flux tower at Duke Forest. The system will comprise of Teflon sampling lines, heated umbilical, pump, valves, manifold to interface with analytical equipment (multi-port to allow simultaneous sampling by 4-6 instruments located in the cabin at the base of the tower) and electronics needed to switch valves in a programable sequence. The system shall be designed such that when air is actively sampled from a single height, bypass flow is pulled through the other inlets.



## **5. Eddy Flux Tower Particulate Sampling System**

The contractor shall construct and install a system for sampling PM<sub>2.5</sub> from the top of the eddy flux tower by instruments located at the base of the tower or in the instrument cabin. The system shall comprise a single inlet at the top of the tower, an unheated sample line/pipe of suitable material, a blower to pull air through the sampling line to the ground and manifold for interfacing with analytical equipment at the base of the tower.

## **6. Picarro Calibration Integration**

The contractor shall integrate the enhanced total NO<sub>y</sub> calibration system into the Picarro NH<sub>3</sub> analyzer's QC procedure. The Picarro analyzer will be installed by EPA's ORD in July of 2020. The contractor shall integrate the calibration system with the Picarro during the Eco Physics installation trip (see Task 3). The contractor shall work with EPA's ORD to determine the parameters to use in the data logger program and challenge concentrations needed for routine QC checks. The contractor shall poll the QC results and deliver data to EPA within 24 hours with the regularly scheduled gas-calibration data submittals.

## **7. Ammonia Flux Site Characterization Database**

Under previous option periods the contractor installed measurement systems to collect soil moisture and temperature, three-dimensional (3D) wind direction, and CASTNET meteorology at three CASTNET sites (BVL130, IL; DUK008, NC; and CHA467, AZ) to develop a database of site characteristics needed for modeling the bi-directional flux of NH<sub>3</sub>. The contractor also visited each site to collect seasonal soil and vegetation samples for analysis. This task is a continuation of this work.

The contractor shall format and document the data into a consistent database format including site information, sensor data, QA/QC results, and analytical data. The database shall be delivered to EPA CAMD by October 1, 2020.

Once EPA sends the contractor a draft final report for the study, the contractor shall perform a review of the figures and tables and then format the report into a searchable PDF file. The contractor shall submit a draft of the formatted report to EPA CAMD 30 days after receipt of the EPA draft. A final report shall be delivered to EPA 30 days after final comments are received.

## **8. Wet-Soluble Organic Nitrogen Analysis**

This work is a continuation of work under the previous Task Order (3010). The contractor shall continue to develop a method to analyze total nitrogen from the CASTNET filter pack Teflon filter extracts from select sites. Under the previous option period, total nitrogen was measured by running the Teflon filter extracts through the EPA/ORD Shimadzu analyzer. Five pilot sites were selected for the 3-month pilot study (KIC003, KS; SAL133, IN; WSP144, NJ; GRS420, TN; and ROM206, CO). The preliminary results show that organic nitrogen is detectable with this method, and the values are consistent with the literature. The contractor shall schedule and perform sample reruns from the initial pilot study to test the stability.

The TOPO will provide technical direction for the contractor to analyze samples from 25 CASTNET sites for 1-year using the Shimadzu analyzer following the established Standard Operating Procedure (GLM-3180-012 Determination of Total Nitrogen in Water and Air Filters by Chemiluminescence for Acid Deposition Projects). The EPA will provide a list of 20 additional CASTNET sites to be included in the study. Duplicate filter packs will be operated at two of the sites to assess the precision of the total nitrogen and organic nitrogen measurements. The contractor shall assume that the duplicate filters will operate at the existing co-located sites (MCK131/MCK231, KY and ROM206/ROM406, CO). Additionally, throughout the year, 80 additional QA/QC samples shall be run (i.e. field and laboratory blanks). The contractor shall deliver a dataset of analyzed, QA'ed concentration data on the normal monthly data delivery schedule with documented metadata. The contractor should assume one repair of the EPA ORD Shimadzu analyzer prior to the 12-month study.

With technical direction from the TOPO, the contractor shall develop a QAPP for measuring WSON using this method. The QAPP will be developed and finalized with input from ORD.

**9. Pilot Study for Determination of PFAS Compounds in Precipitation:** The WSLH has developed a method for measuring targeted PFAS compounds in excess NADP/NTN precipitation samples. The WSLH will supply the funnel, rack, tubes, wash bottle and MeOH ahead of the sampling start date. The sponsoring agency/operators will need to provide their own blue nitrile gloves. The laboratory requires a total of 650mL of precipitation for the PFAS analysis (150 mL for NTN analysis and 500 mL for PFAS). The laboratory will hold samples when the sample volume doesn't meet that requirement and combine two weeks of sample. The contractor shall establish a subcontract with WSLH to fund the sample analysis at Whiteface Mountain (NY98), Washington Crossing (NJ99), Freeport (ME96), and 3 co-located sites at Duke Forest (NC30). The site operators have been provided a training video for how to process the excess precipitation sample that will be used for the PFAS analysis. The WSLH will perform routine blank checks during the analysis.

The WSLH will provide PFAS concentration data quarterly and deposition/precipitation information will be provided once it is validated by the NADP Program Office on the routine validation schedule.

## **V. DELIVERABLES AND SCHEDULE**

### **1. Proposal**

The contractor shall deliver a Task Order Technical Proposal & Cost Estimate in accordance with clause B.7 Task Order Ordering Procedures of the contract. The proposal shall be submitted 10 days after receipt of the SOW.

### **2. Monthly Progress Report**

The contractor shall prepare and submit a monthly progress report by the 15<sup>th</sup> of each month summarizing the progress made, issues encountered or expected, work planned for the next reporting period and costs. These reports shall comply with contract clauses F.1, Monthly Progress Report, and F-5, Reports of Work. Reports shall be delivered electronically.

### **3. Site Characterization Database**

The contractor shall deliver final archived database with valid data and all QA/QC data reported during the field campaign. The database shall include tables with LAI, soil moisture and temperature, corrected 3D wind velocity, laboratory results, and calculated fluxes using soil and vegetation compensation points for the three pilot sites. The contractor shall deliver the final database to EPA by October 1<sup>st</sup> 2020.

### **4. Site Characterization Study Publication**

The contractor shall deliver a single searchable PDF file of the AMoN Site Characterization Report. EPA will provide the contractor with a word version of the report. The contractor shall deliver a draft final and a final report as described under Task 5.

### **5. Enhanced NOy Manuscript**

The contractor shall work with EPA to develop a manuscript describing the methods, QA/QC procedures and results from the enhanced NOy system after testing of the HNO<sub>3</sub> denuder results in an improved concentration value.

## **Distribution of Deliverables:**

Addressee

Copies

EPA Contracting Officer (Mike Fox)	1
EPA Project Officer (Melissa Puchalski)	1
EPA Alternate (Taylor Macy)	1
EPA Technical Advisors (Ralph Baumgardner, John Walker, John Offenburg)	1

EP-W-16-015  
Order#: 68HERH20F0340 (4010)  
Modification#: P00001

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	\$50,000.00	\$176,000.00	\$226,000.00
<b>Total</b>	<b>\$50,000.00</b>	<b>\$176,000.00</b>	<b>\$226,000.00</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	\$196,332.00	\$93,605.00	\$289,937.00
<b>Total</b>	<b>\$196,332.00</b>	<b>\$93,605.00</b>	<b>\$289,937.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, &amp; 30</i>				1. REQUISITION NUMBER PR-OAR-20-00781		PAGE OF 1 10	
2. CONTRACT NO. EP-W-16-015		3. AWARD/ EFFECTIVE DATE 07/09/2020		4. ORDER NUMBER 68HERH20F0341		5. SOLICITATION NUMBER	
6. SOLICITATION ISSUE DATE							
7. <b>FOR SOLICITATION INFORMATION CALL:</b>		a. NAME Michael Fox			b. TELEPHONE NUMBER (No collect calls) 202-564-2550		8. OFFER DUE DATE/LOCAL TIME ET
9. ISSUED BY HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460				10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED OR <input type="checkbox"/> SET ASIDE: % FOR:  <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> SMALL BUSINESS  <input type="checkbox"/> HUBZONE SMALL BUSINESS  <input type="checkbox"/> SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS </div> <div> <input type="checkbox"/> WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM  <input type="checkbox"/> EDWOSB  <input type="checkbox"/> 8(A) </div> <div> NAICS: 541620   SIZE STANDARD: \$15.0 </div> </div>			
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input checked="" type="checkbox"/> SEE SCHEDULE		12. DISCOUNT TERMS		13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) <input type="checkbox"/>		13b. RATING	
15. DELIVER TO OAR/OAQPS/AQAD US Environmental Protection Agency Mail Code: C304-02 109 TW Alexander Drive Durham NC 27711		CODE OAR/OAQPS/AQAD		16. ADMINISTERED BY HQAD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460		CODE HQAD	
17a. CONTRACTOR/ OFFEROR WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972		CODE 038086125		FACILITY CODE		18a. PAYMENT WILL BE MADE BY RTP FMC RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711	
TELEPHONE NO. (b)(4)							
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER				<input type="checkbox"/> 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM			
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	DUNS Number: 038086125 Title: NADP Annual Support (4014)  This task order is issued in accordance with Task Order Ordering Procedures and hereby incorporates the base contract terms and conditions by reference. The effective date for performance to commence is July 9, 2020. The Contractor shall perform in accordance with Attachment A - Statement of Work (6 pages) and the accepted technical proposal and cost estimate dated May <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>						
25. ACCOUNTING AND APPROPRIATION DATA See Schedule						26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$510,852.00	
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED. <input checked="" type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA <input type="checkbox"/> ARE <input checked="" type="checkbox"/> ARE NOT ATTACHED.							
<input type="checkbox"/> 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.				<input type="checkbox"/> 29. AWARD OF CONTRACT: _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: _____			
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)  <div style="text-align: right;">ELECTRONIC SIGNATURE</div>			
30b. NAME AND TITLE OF SIGNER (Type or print)		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (Type or print) Michael C. Fox		31c. DATE SIGNED 07/02/2020	

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0001	<p>29, 2020 (8 pages) in the amount of \$510,852.00.</p> <p>This is a Time-and-Materials (T&amp;M) task order with a total ceiling price of \$510,852.00, which the Contractor is not authorized to exceed. The Contractor exceeds at its own risk. The total obligated/funded ceiling amount for this order is currently \$60,000.00. This order is incrementally funded as detailed in Attachment B Summary of Amounts and Ceilings and Attachment B is hereby incorporated (1 page).</p> <p>Contracting Officer's Representative (COR) for this task order: Macy Taylor, (202) 343-9183, Macy.Taylor@epa.gov</p> <p>Alternate COR: Melissa Puchalski, (202) 343-9882, Puchalski.Melissa@epa.gov</p> <p>The services of this order are for severable. TOCOR: Taylor Macy Period of Performance: 07/09/2020 to 07/08/2021</p> <p>NADP Annual Support Incrementally Funded Amount: \$60,000.00</p> <p>Accounting Info: 20-21-C-58D5-000A45-2505-2058DC0044-001 BFY: 20 Continued ...</p>				510,852.00

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED    ☐ INSPECTED    ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: \_\_\_\_\_

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE			32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
			32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE	
33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT  <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				
38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY		
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT			42a. RECEIVED BY (Print)	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		41c. DATE	42b. RECEIVED AT (Location)	
			42c. DATE REC'D (YY/MM/DD)	42d. TOTAL CONTAINERS

NAME OF OFFEROR OR CONTRACTOR  
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	EFY: 21 Fund: C Budget Org: 58D5 Program (PRC): 000A45 Budget (BOC): 2505 DCN - Line ID: 2058DC0044-001 Funding Flag: Complete Funded: \$60,000.00				

**ATTACHMENT A****Statement of Work**

**Title:** NADP Annual Support (4014)  
**Contractor:** Wood Environment & Infrastructure Solutions, Inc.  
**Contract #:** EP-W-16-015  
**Task Order #:** 68HERH20F0341  
**Period of Performance:** 7/9/2020 to 7/8/2021

**EPA Key Personnel****Task Order Project Officer (TOPO)/Contract Level Project Officer (PO):**

Taylor Macy  
Clean Air Markets Division (OAP/OAR/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9183  
*email:* macy.taylor@epa.gov

**Alternate TOPO:**

Melissa Puchalski  
Clean Air Markets Division (OAP/OAR/CAMD)  
1200 Pennsylvania Ave., NW  
Mail Code 6204M  
Washington, DC 20460  
*phone:* (202) 343-9882  
*email:* puchalski.melissa@epa.gov

**Contracting Officer (CO):**

Michael Fox  
Contracting Officer  
Administrative Contract Service Center  
1200 Pennsylvania Ave N.W.  
Mail Code 3803R  
Washington DC 20460  
*phone:* (202) 564-2550  
*email:* fox.michael@epa.gov



## STATEMENT OF WORK

### I. INTRODUCTION

The Clean Air Status and Trends Network (CASTNET) is a long-term environmental monitoring network that measures changes in ambient air quality and assesses atmospheric deposition over broad geographic regions of the U.S. (<https://www.epa.gov/castnet>). Operating since 1987, CASTNET has evolved into a robust regional monitoring program which currently consists of approximately 95 monitoring stations nationwide. The Environmental Protection Agency (EPA) coordinates the operation of the network in cooperation with numerous federal, tribal, state and local partners.

The primary monitoring objectives of CASTNET are to:

- Provide high quality data on atmospheric deposition, rural ground level ozone and other forms of atmospheric pollution;
- Support the primary and secondary ozone NAAQS and provide data on NAAQS compliance in rural areas;
- Monitor the status and trends in regional air quality and atmospheric deposition;
- Assess and report on geographic patterns and long-term, temporal trends in ambient air pollution and atmospheric deposition;
- Improve our understanding of PM and ozone formation;
- Validate and improve atmospheric models;
- Provide data for health-based research and epidemiology studies;
- Assess the effectiveness of EPA's emission reduction programs; and
- Support science and ecosystem studies.

CASTNET sites measure weekly average concentrations of sulfate ( $\text{SO}_4^{2-}$ ), nitrate ( $\text{NO}_3^-$ ), ammonium ( $\text{NH}_4^+$ ), sulfur dioxide ( $\text{SO}_2$ ), nitric acid ( $\text{HNO}_3$ ), chloride ( $\text{Cl}^-$ ) and the base cations ( $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$  and  $\text{Ca}^{2+}$ ) using a 3-stage filter pack. In addition, each site may make ancillary measurements, including hourly ozone ( $\text{O}_3$ ), hourly meteorology, ammonia ( $\text{NH}_3$ ) gas using passive devices, and trace-level gases. Trace-level gas monitors include reactive oxidized nitrogen ( $\text{NO}_y$ ), nitric oxide ( $\text{NO}$ ), sulfur dioxide ( $\text{SO}_2$ ) and carbon monoxide ( $\text{CO}$ ). CASTNET  $\text{O}_3$ , meteorological, and trace gas measurements follow the requirements in the Code of Federal Regulations (CFR) and EPA's Quality Assurance Handbook.

### II. PURPOSE

The primary purpose of this task order is to provide support for the National Atmospheric Deposition Program's (NADP's) network operations and site support. This includes EPA's Clean Air Markets Division (CAMD) support for analytical chemistry, quality assurance (QA), and network equipment services provided by the Wisconsin State Laboratory of Hygiene (WSLH) for NADP.

### III. CONTRACT LEVEL STATEMENT OF WORK REFERENCE

The tasks to be performed under this task order are consistent with the activities authorized in Task 22 (Level of Effort) from the contract's Statement of Work for Contract # EP-W-16-015 (CASTNET V).

### IV. TECHNICAL DIRECTION

## 1. Prepare a Technical Proposal & Cost Estimate

The Contractor shall prepare a Technical Proposal and Cost Estimate using the fixed labor rates for the Level of Effort task orders under the CASTNET V contract clause B.1, Fixed Rates for Services, using time and materials with a cost ceiling.

The contractor shall ensure that all requirements under this task order are met through program management and QA performance reviews. The contractor shall establish the project in their contract tracking system, review, approve and track subcontract proposals and staff, track progress of the projects, and QA and review all required deliverables.

## 2. NADP Participation

The contractor shall coordinate with NADP's Program Office (PO) and Central Analytical Laboratory to provide chemical and analytical, data validation, and site support services for all NADP's National Trends Network (NTN), Ammonia Monitoring Network (AMoN), and Atmospheric Mercury Network (AMNet) sites listed in Tables 1, 2, and 3, respectively. EPA's CAMD supports the chemical analysis, data validation, network equipment depot, and PO coordination for 32 NTN sites; chemical analysis and PO coordination of 71 AMoN sites; and PO coordination of 2 AMNet sites.

The contractor shall coordinate with NADP's PO to provide quality assurance services for NTN and AMNet to ensure conformance with NADP's network quality assurance plans and procedures for field and laboratory operations and data management.

The contractor shall coordinate with NADP's Program Office to provide support for use of Parameter-elevation Regressions on Independent Slopes *Model (PRISM)*, which produces digital grids of precipitation estimates from many precipitation-monitoring networks.

Table 1 NADP's NTN sites supported by EPA's CAMD

NTN Site ID	Site Name
AL99	Sand Mountain Ag Exp Station
AZ98	Chiricahua
CO08	Four Mile Park
CO10	Gothic
CO92	Sunlight Peak
CO94	Sugarloaf
CT15	Abington
FL03	Bradford Forest
FL23	Sumatra
GA20	Bellville
IL11	Bondville
IL46	Alhambra
ME04	Carrabassett Valley
MI51	Unionville
MI52	Ann Arbor
MI94	Sault Ste Marie
MN18	Fernberg
NC06	Beaufort
NC30	Duke Forest

NJ39	Cattus Island County Park
NJ99	Washington Crossing
NY22	Akwesasne Mohawk - Fort Covington
NY52	Bennett Bridge
OH54	Deer Creek State Park
OR97	Hyslop Farm
PA00	Arendtsville
TN04	Speedwell
VA13	Horton's Station
VA24	Prince Edward
WA21	LaGrande
WI35	Perkinstown
WV05	Cedar Creek State Park

Table 2 NADP AMoN sites supported by EPA's CAMD

AMoN Site ID	Site Name
AL99	Sand Mt Research & Extension Ctr
AR03	Caddo Valley
CO10	Gothic
CO13	Fort Collins
CT15	Abington
FL19	Indian River
FL23	Sumatra
GA41	Georgia Station
ID07	Nez Perce Tribe
IL11	Bondville
IL37	Stockton
IL46	Alhambra
IN20	Roush Lake
IN22	SW Purdue Ag Center
IN99	Indianapolis
KS31	Konza Prairie
KS97	Kickapoo Tribe of the Kickapoo Indian Reservation in Kansas - Powhattan
KY03	Mackville
KY29	Crockett
KY98	Cadiz
MD06	Blackwater NWR
ME93	Ashland
MI51	Unionville
MI52	Ann Arbor
MI95	Hoxeyville
MI96	Detroit
MN18	Fernberg (3 and 1)
MN02	Red Lake

MS30	Coffeerville
NC02	Cranberry
NC06	Carteret
NC25	Coweeta
NC26	Candor
NC30	Duke Forest
NC35	Clinton Crops Research Station
NC98	Duke Forest Flux Tower
NE98	Santee
NH02	Hubbard Brook
NJ98	Washington Crossing- CASTNET
NM98	Navajo Lake
NM99	Farmington
NY20	Huntington Wildlife
NY91	Claryville
NY94	Nick's Lake
NY98	Whiteface Mountain
OH02	Athens
OH09	Oxford
OH27	Cincinnati
OH54	Deer Creek State Park
OH99	Quaker City
OK99	Stilwell
PA00	Arendtsville
PA29	Kane Experimental Forest
PA96	Penn State - Fairbrook Park
PA56	M. K. Goddard
PA97	Laurel Hill
SC05	Cape Romain National Wildlife Refuge
TN04	Speedwell
TN07	Edgar Evins
TX41	Alabama-Coushatta Tribe of Texas
TX43	Canonceta
UM**	Confederated Tribes of the Umatilla Indian Reservation
VA13	Horton's Station
VA24	Prince Edward
VT99	Underhill
WI07	Mayville
WI35	Perkinstown
WV05	Cedar Creek State Park
WV18	Parsons
WY06	Pinedale
WY95	Brooklyn Lake

\*\*NADP site name is not yet finalized

Table 3 NADP's AMNet sites supported by EPA's CAMD

AMNet Site ID	Site Name
NJ30	New Brunswick
NJ54	Elizabeth Lab

## V. DELIVERABLES AND SCHEDULE

Laboratory data and resultant concentration in precipitation data will be delivered by WSLH to the NADP website (<http://nadp.slh.wisc.edu/>). The contractor will not perform analysis, validation, posting or QA/QC of data under this task order.

### 1. Technical Proposal & Cost Estimate

The contractor shall deliver a Task Order TP&CE in accordance with clause B-1 in the Contract (EP-W-16-015). The TP&CE shall be submitted 10 days after receipt of the SOW.

### 2. Monthly Progress Report

The contractor shall prepare and submit a monthly progress report by the 15<sup>th</sup> of each month summarizing the progress made, issues encountered or expected, work planned for the next reporting period and costs. These reports shall comply with contract clauses F.1 Monthly Progress Report and F-5 Reports of work. Reports shall be delivered electronically.

### Distribution of Deliverables:

Addressee	Copies
EPA Contracting Officer (Mike Fox)	1
EPA Task Order Project Officer (Taylor Macy)	1
EPA Alternate TOPO (Melissa Puchalski)	1

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	-	\$60,000.00	\$60,000.00
<b>Total</b>	-	<b>\$60,000.00</b>	<b>\$60,000.00</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$510,852.00
<b>Total</b>	-	-	<b>\$510,852.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE		PAGE OF PAGES	
				1 2	
2. AMENDMENT/MODIFICATION NO. P00001		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. PR-OAR-20-01288	
5. PROJECT NO. (If applicable) 4014		6. ISSUED BY HQAD		7. ADMINISTERED BY (If other than Item 6) CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. Attn: JOSEPH FARRELL 751 Arbor Way Ste 180 Blue Bell PA 194221972		(X)		9A. AMENDMENT OF SOLICITATION NO.	
CODE 038086125		FACILITY CODE		9B. DATED (SEE ITEM 11)	
		X		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-W-16-015 68HERH20F0341	
				10B. DATED (SEE ITEM 13) 07/02/2020	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.  
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) Net Increase: \$230,000.00  
See Schedule

**13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) EPA-B-32-103 - LIMITATION OF GOVERNMENT'S OBLIGATION

**E. IMPORTANT:** Contractor ☒ is not ☐ is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 038086125

The purpose of this modification is to obligate incremental funding in the amount of \$230,000.00 to this task order.

TOCOR: Taylor Macy

LIST OF CHANGES:

Reason for Modification: Funding Only Action

Obligated Amount for this Modification: \$230,000.00

New Total Obligated Amount for this Award: \$290,000.00

Incremental Funded Amount changed: from \$60,000.00 to \$290,000.00

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Michael C. Fox	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 08/13/2020

Previous edition unusable

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-W-16-015/68HERH20F0341/P00001	2	2

NAME OF OFFEROR OR CONTRACTOR

WOOD ENVIRONMENT &amp; INFRASTRUCTURE SOLUTIONS, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>CHANGES FOR LINE ITEM NUMBER: 1</p> <p>Obligated Amount for this Modification: \$230,000.00</p> <p>Incremental Funded Amount changed from \$60,000.00 to \$290,000.00</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code: 20-21-C-58D5-000A45-2505-2058DC0075-001</p> <p>Beginning FiscalYear 20</p> <p>Ending Fiscal Year 21</p> <p>Fund (Appropriation) C</p> <p>Budget Organization 58D5</p> <p>Program (PRC) 000A45</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 2058DC0075-001</p> <p>Amount: \$230,000.00</p> <p>Subject To Funding: N</p> <p>Payment Address:</p> <p style="padding-left: 40px;">RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p><a href="http://www2.epa.gov/financial/contracts">www2.epa.gov/financial/contracts</a></p> <p>Durham NC 27711</p> <p>Payment:</p> <p style="padding-left: 40px;">RTP Finance Center</p> <p style="padding-left: 40px;">US Environmental Protection Agency</p> <p style="padding-left: 40px;">RTP-Finance Center (AA216-01)</p> <p style="padding-left: 40px;">109 TW Alexander Drive</p> <p style="padding-left: 40px;"><a href="http://www2.epa.gov/financial/contracts">www2.epa.gov/financial/contracts</a></p> <p style="padding-left: 40px;">Durham NC 27711</p> <p>Period of Performance: 07/09/2020 to 07/08/2021</p>				



EP-W-16-015  
Order#: 68HERH20F0341 (4014)  
Modification#: P00001

**ATTACHMENT B**  
**SUMMARY OF TASK ORDER OBLIGATION/CEILING AMOUNTS**

Total Funding/Obligation Amounts			
Period	Previous Amount	This Action	Amount
Base Period	\$60,000.00	\$230,000.00	\$290,000.00
<b>Total</b>	<b>\$60,000.00</b>	<b>\$230,000.00</b>	<b>\$290,000.00</b>

Total Task Order Ceiling			
Period	Previous Amount	This Action	Amount
Base Period	-	-	\$510,852.00
<b>Total</b>	<b>-</b>	<b>-</b>	<b>\$510,852.00</b>

**Note:** This task order is incrementally funded in accordance with contract clause B.5 Limitation of Government's Obligation (EPA-B-32-103).